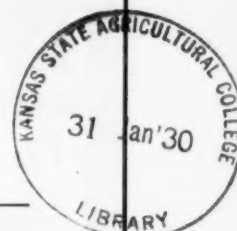


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Baltimore, Md., January 30, 1930



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Go South for Health and Long Life

RECENTLY the MANUFACTURERS RECORD was advised that a representative of a large Western life insurance company stated that the reason why his organization had not gone after business in the Southern states was because "the death rate from malaria, typhoid and hookworm was so high in the Southeast." Expressing it mildly, the MANUFACTURERS RECORD was surprised that such a statement should come from a representative of one of the big life insurance companies.

Let us look into the mortality statistics issued by the Bureau of Census, Department of Commerce. Taking the Southern states as a whole, the total death rates per thousand from all causes is lower than the rate in some other geographic divisions of the country. The Southeastern states have in most cases a death rate from pneumonia and similar diseases about one-half as great as the number of deaths from such diseases in the North and West. This one comparison, even if the death rate from malaria, typhoid and pellagra in the South were two or three times as large as it is, would still give the South a greater health showing than the North. It is from the total death rate per thousand of population statistics that one can get a true picture of the situation. In this the South is in a very favorable position, and even including the negro population the death rate per thousand in the Southeastern states is below that of many other states in the North and West. When the death rate per thousand of the white population in the South is considered, from the health point-of-view the South stands out.

Merely as a matter of comparison, in the following is listed the death rate per thousand for nine of the Southeastern states, as compared with the death rate per thousand for nine Northern and Western states. The figures for the South cover the white population and the figures for the other states cover the death rate per thousand of population for the year 1928.

White population, death rate per thousand, South	White population, death rate per thousand, other states
Maryland 11.8	California 14.5
Virginia 9.5	Maine 13.8
North Carolina 9.7	New Hampshire 14.1
South Carolina 9.4	Vermont 13.9
Georgia 9.0	New York 13.1
Florida 11.7	Pennsylvania 12.1
Alabama 8.6	Indiana 12.8
Tennessee 10.0	Illinois 12.2
Kentucky 9.8	Michigan 11.9

It will be noted that in each of the Southeastern states the death rate per thousand of white population is lower than in any of the other states mentioned. Likewise the death rate per thousand population in the South for the states mentioned, with the exception of Maryland and Florida, was lower than the average rate for the entire United States, which amounted to 11.4 per cent in the statistics from which

the foregoing figures were compiled. The slightly higher death rate in Florida is due to the fact that many aged people and invalids go to that state to prolong their lives. Even including the large negro population, the death rate per thousand in the South of both white and colored was lower in practically each of the Southeastern states than in the other states reported in the accompanying table.

A more detailed comparison of the figures given in the foregoing statement is really a revelation as to the lower death rate in the South as compared with these leading states of the North and West. Maryland, though ranking above the Southeastern states mentioned is a point under Michigan, the lowest in the Western and Northern group listed in the foregoing table. Florida, notwithstanding the great number of invalids and aged people who go to that state for its climatic advantages, has a death rate nearly 20 per cent lower than that of California, and very much lower than the rate in the nine states of the North and West included in this statistical comparison. Virginia is more than 30 per cent lower than Maine. North and South Carolina and Georgia have an average death rate slightly above 9 per thousand of white population, as against an average of all population for New Hampshire, Vermont and New York of 13.7.

These figures are all taken from the official reports of the Federal Government, and present an unanswerable argument in behalf of the great climatic advantages of the South, which give more health and longer life to the people of these states than to those of the nine Northern and Western states.

Moreover, the malarial conditions which once existed in some parts of the South are being very rapidly eliminated, while the pulmonary troubles, such as pneumonia, due to the harshness of the climate of these other states cannot be overcome because their climatic conditions can never be changed by man. The value of sunshine for health is now universally recognized, and the South leads the nation in the amount of sunshine.

Under the circumstances, the MANUFACTURERS RECORD is unable to comprehend how the representative of the insurance company mentioned reached the conclusion he did since the death rates in the South are of so low a percentage as compared with the high rates in other sections.

Another point to be considered is that the life insurance companies owned and operating in the Southern states are making rapid progress and their expansion has been most amazing. Evidently they are finding that the Southern people are not dying off too quickly, and probably a measure of their success is due to the fact that the South has a lower death rate than some of the states in the North and West. Moreover, most of the biggest insurance companies in the country are always eagerly working for Southern business, thus completely disproving the statement of the representa-

tive of one Western company in regard to the death rate in the South. And they show their faith in the South by having some billions of dollars invested in Southern securities and mortgages.

SOUTHERN LAND OWNERS AND BANKERS MUST SAVE THE TENANT FARM SYSTEM

THE tenant system of farming in the South has been an unspeakable curse to that section and to the tenant farmers alike. It must not be thought, however, that the South is the only region in that condition; other sections are affected in a similar manner. Take this illustration: A landowner owns a big tract of land. He puts tenants on it, and most of them are housed in so-called dwellings the majority of which are unfit for human habitation. Many cotton mill village houses are palaces in comparison. No tenant knows whether he can retain the same farm from year to year. Necessarily this prevents any attempt to better the condition of the soil or to grow feedstuffs. The advance made to the tenant by the owner of the land, or by factors, simply covers the growing of cotton in the South or grain in the West and into that all of his energy must be put, leaving little or nothing to be expended for diversified farming.

Primarily the landowner and the country banker are responsible for the failure of tenant farmers to raise their own foodstuffs. They have made it wellnigh impossible for the tenant farmer to raise food supplies. A great revolution must take place in the attitude of Southern banks and landowners, for the burden of responsibility rests on them; some system must be adopted by which a tenant farmer can become a farm owner on a basis of cost that will enable him to work out the indebtedness and to improve his farm and develop a diversification of agriculture which will at least provide him and his family with foodstuffs and his live stock with feedstuffs.

Back of all of the tenant system, with its great curse of impoverished farmers, is the responsibility that rests largely upon big landowners and the banks which have co-operated with the landowners rather than with the tenant farmer. While a favorable report has been made in the Senate Committee in behalf of the establishment of a few Federal colonies, financed and directed by the Federal Government, with loans to selected farmers at 4 per cent for 40 years, this would not be a drop in the bucket if adopted compared to what must be furnished in some way by the Federal Government or through some other source. The establishment of such colonies would prove a handicap rather than a blessing to other farmers. It would put a premium on these Federal colonies, conducted at low rates of interest, which millions of other farmers could not possibly secure under the present system of financing.

The situation is one that has not received the profound study on the part of the great business leaders of the country which its importance demands. Absorbed in their own financial or manufacturing operations, they have failed to take account of economic conditions which have forced farmers into the present situation. They and the Government must find a way out of that condition. That agriculture is greatly depressed, that all the plans thus far projected for its betterment will fall short of restoring the whole farm population to prosperity, in our opinion admits of no question. Perhaps the Farm Board can lead the way to force landowners and bankers to deal on a better basis with tenant farmers. If so that organization will go a long way toward solving this great problem and thus reduce the overproduction of staple crops.

FEDERAL BUILDING WORK SHOULD BE HASTENED

CONGRESS has voted large sums for the erection of public buildings, but specifying that this amount must be stretched over a period of not less than eight years, which greatly minimizes the whole situation from the standpoint of the Federal Government.

In reply to a letter from the MANUFACTURERS RECORD, urging that in order to stimulate industry and to increase employment, so much needed at present, the work on Federal buildings should be hastened, Ferry K. Heath, Assistant Secretary of the Treasury, writes the MANUFACTURERS RECORD:

"I have your letter of January 7 urging that the public building program be carried out as rapidly as possible.

"Owing to limitation fixed in the Act on the amount that may be expended annually the program under the present authorization must necessarily extend over a period of not less than eight years and the places are taken up in the order of their comparative need."

Many points selected by the agents of the Government as needing a public building must under this arrangement wait their turn possibly for seven or eight years. As these buildings are all badly needed, as their prompt construction would be of enormous value to the country at large, the MANUFACTURERS RECORD strongly urges Congress to make some provision by which construction work can be begun promptly in every town and city which has been designated by experts as needing a Federal building. With the appropriations by Congress for this purpose extended over such a period of years as under the present plan the value of this work to the country will be greatly minimized, and many communities sadly needing new Federal buildings will be denied what the Government itself recognizes as a necessity, for some years to come.

BUSINESS OUTLOOK AS THE YEAR ADVANCES

IN discussing the business outlook, with special reference to Southern pine, F. W. Reimers of Hammond, La., president of the Southern Pine Association, recently said:

"There is awaiting the American public and the American business man an opportunity for expansion greater than ever existed before. Never before in our history has industry emerged from a crash with as few economic consequences as we find today. President Hoover believed that the present slack in business can best be taken up by a broad construction program of all kinds, including industrial and transportation equipment, roads, public works, buildings, ships and public utilities, and particularly home building and modernizing in the small communities and on the farm. Upon such a basis the Southern pine industry along with others cannot help but show improvement during the coming year."

H. C. Berckes of New Orleans, secretary-manager of the Southern Pine Association, referring to conditions during 1929 and the outlook for 1930, said:

"The Southern pine manufacturing industry has lifted its head well above other industries and regional manufacturing groups in progressive manufacturing and merchandizing principles. Upon this basis, I view the coming year with a certain well founded optimism, for such spirit and aggressive courage in new fields cannot but be reflected on our order books as time rolls on."

A. C. Goodyear of Buffalo, N. Y., a director of the Southern Pine Manufacturers Association, and identified with the great lumber interests of Bogalusa, said:

"There is no reason to expect a falling off in demand ex-

cept from certain consumers whose business it appears will be curtailed by reason of the decline in prices on the New York Stock Exchange."

While here and there through the reports of the directors of the Southern Pine Association there is a touch of pessimism, the situation as a whole is viewed by the directors of the organization as indicating a busy and successful year.

Turning directly from the Southern pine interests to a statement of Frasier Jelke of the New York Stock Exchange, it is interesting to note that he says:

"It seems to be highly significant that industry itself, generally speaking, is not lacking in confidence as regards the future. Testimony to this is submitted by the flood of initial, extra or increased dividends that have been announced since the stock market debacle."

And there comes to the MANUFACTURERS RECORD from Herbert N. Casson, editor of The Efficiency Magazine of London, some very interesting statements which appear in the January issue of that publication. Under the head of "1930! A Year of Initiative" Mr. Casson says:

"To every business man I would say—this will be the best year you ever had to start improvements, to buy new equipment, to train your staff, to modernize your building, to bring your whole business up to date.

"There are now all manner of labor-saving machines for the factory and the office. There are gravity conveyors and spiral chutes and better lathes and steam accumulators and electric motors and so on for factories. This year 1930 should be a year of initiative."

Then after a review of the whole situation, which fits the conditions in the United States equally as well as in Great Britain, Mr. Casson emphasizes the fact that Andrew Carnegie in times of depression always started the building of new mills in order that he might run at full speed in a year of prosperity, and advised others to follow so wise an example, and in closing an interesting article entitled "The Opportunities of 1930" The Efficiency Magazine prints in large type the following:

"The fortunes that will be made this year will be made by keen buying, up-to-date salesmanship, and efficient advertising. * * * There never was a time when a good advertisement was so profitable, nor when a bad advertisement was so useless as it is today."

A study all along the line indicates that there will be business, and lots of it, for the institution which has the backbone and the grit to see and seize the opportunity. Here is a country of 120,000,000 people, the most virile and active on the face of the earth. They cannot be downed by disaster. They rise superior to every difficulty and make it the stepping-stone for larger achievements. The rebuilding of San Francisco is an example. The spirit with which Galveston people, following the storm which resulted in about 8000 deaths, undertook to make that city safe against all future storms, the way in which Baltimore was rebuilt after the fire in 1904 on a larger scale than ever before are all typical of the spirit which prevails throughout America. Broadly speaking, the greater the difficulty this country faces the greater is the spirit of energy and initiative thrown into the task of development.

During 1930 we are going to build more highways than ever before, we are going to do more river improvement work, more extension of electric light and power lines, more expansion of our vast network of telephone lines. We are going to expand railroad facilities, increase traffic on the highways of the country, and do a thousand and one other things which will add to the employment of the people and create wealth for the good of all. Let us, therefore, go forward in 1930 with renewed energy.

Temperance and labor are the two best physicians.—
Rousseau.

THE OPEN SHOP OR AMERICAN PLAN IN THE BUILDING OF LOS ANGELES AN INSPIRATION TO THE SOUTH

IN 1900 Los Angeles had a population of 319,198. At present its population is estimated at 1,450,000.

In 1900 the total assessed valuation for taxation was \$131,000,000; in 1920 it amounted to \$1,247,000,000, and in 1929 to \$4,300,000,000. In addition to these assessed values there are unassessed values, such as public parks, streets, highways and municipally owned utilities valued at \$2,700,000,000.

In 1900 the bank deposits of Los Angeles amounted to \$24,206,000, in 1910 to \$118,466,000, and in 1930 to \$1,368,378,000.

Here is a record of growth that offers a lesson to every city in the South.

In this issue the story is told of how Los Angeles has for 40 years fought a great fight in behalf of the American Plan or Open Shop as against the closed union shop and the remarkable growth of that town based on the open shop and not on natural advantages. There was a time when that fight meant death to many Los Angeles newspaper people. But that community never wavered. The paper whose plant was dynamited, killing many of the employees, never halted in its fight for the Open Shop as against the closed or union shop.

The determination of the Communists and the American Federation of Labor to try to capture the labor interests of the South and to disrupt the pleasant relationships that have existed in the past, and to stir up afresh the race question, makes the story of Los Angeles' battle for the Open Shop a matter of tremendous interest to the whole South at the present time. Will the South have that degree of backbone and determination which saved Los Angeles from domination by radicalism, or will it bow as San Francisco did for many years to the complete domination of labor unionism?

The point is made very clear in the article by Ralph W. Trueblood, managing editor of the Los Angeles Times, that the Open Shop or the American Plan boycotts no one. It does not keep any man from working. It encourages independence. It makes it possible for union and non-union men to work side by side. And that is the spirit which must be cultivated throughout the South at the present time. Some industries in the South have made this fight and won out. The progressive cities of the South must make it if they would match the remarkable growth of Los Angeles. It is not the natural advantages of California, not the climate or the natural resources which made Los Angeles what it is. It is the spirit of the people. Will the South show equal virility and spirit in meeting the problems which we must now face on the labor situation?

It is needless to remind our readers that the MANUFACTURERS RECORD believes in the highest wages that industry can possibly pay and that it believes in the right of every man to belong to a labor union or not as he individually may prefer, but we absolutely deny the right of any organization to attempt to dictate by force to those who do not belong to it that they shall not work when and where they please. Moreover, the employer has a right to say whom he will employ without the domination of any labor organization. The American or Open Shop system does not in any way whatever deny the right of laboring men to organize, but it does deny the right of any organization to prevent other men from working when and where and for whom they please.

We believe that every employer should do the best in his power to deal fairly and squarely with his employees, to let them know that he is in every sense seeking their betterment and that of humanity in general. Many employers are carrying out to the fullest the Golden Rule of doing unto

others as they would that under similar circumstances others would do unto them, but not all employers are as thoughtful in this respect as they should be. Cooperation and conciliation on both sides, with absolute freedom from domination by unions either of the independent worker or the employer, can be made to produce the best results for all.

Los Angeles attributes its progress not to climate, not to tourists, not to natural advantages, but mainly to the industrial development created by reason of the American or Open Shop plan. On that point we shall soon give some striking facts. The South surpasses Los Angeles in natural advantages. Will it meet a great economic issue with equal energy?

THE PRESS OF 50 YEARS AGO AND TODAY

ABOUT 1875, or more than 50 years ago, an officer of a leading Southern transportation company invited a number of editors of leading Eastern papers to take a trip through Virginia and Carolina to make a study of what the South or that portion of it was doing in its efforts to overcome the disaster of the war. The Southern people were ready to welcome these visitors from the North and East. Many editors accepted the invitation. The views expressed in public addresses at various points in Virginia and Carolina, and the letters they sent back to their papers, breathed a spirit of enthusiastic appreciation of the South and of the hearty welcome they received. They gave unstinted praise to the people of this section and seemed to rejoice in being able to tell through their papers the story of the progress the South was even then trying to make in getting financially on its feet.

Shortly thereafter a large group of editors of leading New England papers accepted an invitation to go South and their praise also of this section was strong enough to touch the heart of any lover of the South.

That was the spirit of newspapers of those days. Here and there a few South-haters waved the bloody shirt, but many Northern papers never missed an opportunity to give generous praise to the South and to Southern people.

There has come a great change, however, of recent years over the spirit of newspaper work in this country, frequently with a decided lowering in the standard of ethics. Many today seem to be moved by the "jazz" spirit of the age, a spirit of criticism and hostility to everything that is good. This has been preeminently seen during the last few months in the bitterness with which some newspaper people, without any knowledge whatever of the subject, have viciously denounced cotton mill interests of the South and to some extent have criticized the whole South.

Southern papers themselves have in many cases fallen far short of the high standard of the days of Grady, Avery, Dawson, Belo, Hemphill and a host of mighty men of the pen who held editorial sway in the South from the days of the Civil War until they passed to the Great Beyond.

One of the older members of that group, still living, is A. B. Williams who 30 years ago was editor of the Greenville, S. C., News. He was for years an outstanding newspaper worker in the South, and today his editorials on ethical and religious questions for the Southern Churchman of Richmond are among the best appearing in any religious paper in America. Thirty years ago Mr. Williams lived and moved and had his being in the very heart of the textile interests of the South. He knew the textile men, managers and operatives, and he knew their good qualities. He knew what this industry was doing for the operatives and he has kept in touch with that work. He tells us that he now marvels sometimes at the spirit abroad in the land, which causes many papers to be filled with the teachings of Communism, seeking to tear down instead of building up civilization.

DECREASED VALUE OF FARM PRODUCTS IN 1929

THAT agriculture in many sections of the country is still in an extremely bad condition is beyond doubt. Confirmation of this is shown in recent crop production figures covering the past year, which are gradually becoming available as the returns are assembled and compiled.

In a comparison of annual crop values issued by the United States Department of Agriculture it is shown that in 1929 the estimated value of 67 crops was \$8,664,689,000, or a gain of \$91,776,000 over 1928. On the face of it, this increase is favorable, but it is not so impressive when we consider that the value of the potato crop alone was \$200,000,000 in excess of the 1928 output. Maine, a great potato producing state, for instance, more than doubled its crop values in 1929. Many states reported a considerable increase in crop values, based on the 67 crops, but in several states in the North and South there was a decline.

On the other hand, it is gratifying to note that Alabama, Arkansas, Louisiana, Maryland, Georgia and Mississippi especially, South Carolina, and Tennessee made gains in total crop values last year compared with 1928. Texas, Oklahoma, North Carolina and Missouri were in the class with Illinois, Michigan, North Dakota, Kansas and Montana in that they all reported a substantial decrease in 1929 compared with 1928.

States	Decrease compared with 1928
Illinois	\$13,555,000
Michigan	10,183,000
North Dakota	53,924,000
Missouri	16,416,000
Kansas	68,453,000
Montana	27,967,000
Florida	2,711,000
North Carolina	16,911,000
Oklahoma	40,614,000
Texas	145,176,000
Total	\$395,910,000

In the ten foregoing states there was a decrease in crop values in 1929 of nearly \$396,000,000 as compared with a gain of \$91,776,000 for the entire country. The decrease in the whole South for the 67 crops reported was \$89,764,000.

FARM VALUE OF 67 CROPS IN THE SOUTHERN STATES.

	1928	1929
Alabama	\$193,219,000	\$199,975,000
Arkansas	208,444,000	214,368,000
Florida	109,519,000	106,808,000
Georgia	225,079,000	244,043,000
Kentucky	193,151,000	193,404,000
Louisiana	154,472,000	164,820,000
Maryland	59,896,000	65,688,000
Mississippi	220,817,000	261,858,000
Missouri	269,136,000	252,720,000
North Carolina	308,088,000	291,177,000
Oklahoma	289,236,000	248,622,000
South Carolina	141,611,000	154,513,000
Tennessee	184,488,000	203,096,000
Texas	755,715,000	610,539,000
Virginia	153,481,000	164,384,000
West Virginia	58,909,000	59,482,000
Total South	\$3,525,261,000	\$3,435,497,000
Total United States	\$8,572,913,000	\$8,664,689,000

SUPERB PRESENTATION OF FLORIDA

THE National Geographic Magazine for January is devoted almost wholly to Florida. Superbly illustrated with colored photographs of scenes of many kinds, the rich tropical luxuriance of flowers and other vegetation, the National Geographic Magazine has rendered a service of inestimable value not simply to Florida, but a service of equal value to millions of people throughout the country. Its presentation of Florida and its attractions will turn the thoughts of millions of people to the charm of life under the sunshine of Florida and away from the harshness of the winters in the North and West.

While the National Geographic has from time to time devoted special articles to other states, we believe this is the most comprehensive and the most beautifully illustrated issue that it has ever given to any state in the Union.

Los Angeles' Forty-Year War for Freedom and Its Wonderful Progress

By RALPH W. TRUEBLOOD, Managing Editor, the Los Angeles Times.

[One of the phenomena of the rapid growth of this nation is Los Angeles. Since 1900 the population of Los Angeles has jumped from 319,198 to 1,450,000, and an even more remarkable increase is found in the growth of wealth of that city which, with an assessed property valuation of \$131,000,000 in 1900, jumped to \$1,247,000,000 in 1920 and it is now estimated at over \$4,300,000,000. If unassessed sources of wealth be added such as public parks, buildings and municipally owned utilities the total valuation would be \$7,000,000,000.

Banking capital grew from \$3,263,000 in 1900 to \$75,795,000 in 1930, and deposits increased from \$24,206,000 to \$1,368,378,000. The value of manufactures in 1927 was \$610,000,000, or about double the value of manufactured products in 1921.

The reasons for so extraordinary a growth are worth knowing. In a series of articles published in the Los Angeles Times by R. W. Trueblood, managing editor, the conditions of employment in the city are given as one major cause; and the turning point in the fight for the open shop is called the turning point, likewise, in the city's growth. A brief account of this spectacular struggle, and of the issues involved, is here presented by Mr. Trueblood. Just now when efforts are being made to unionize the South the facts presented about Los Angeles, its fight for the open shop and its amazing progress are of vital interest to the whole country.—Editor MANUFACTURERS RECORD.]

The plans being made by the American Federation of Labor to organize Southern labor recall to the memories of Los Angeles people the long and bitter warfare waged by the same organization against the establishment and maintenance of the American plan or open shop as the cornerstone of this city's extraordinary industrial development.

A little over 19 years ago, at seven minutes past one o'clock in the morning of October 1, 1910, the Los Angeles Times Building was completely destroyed by a clockwork bomb of high-power dynamite planted by an agent specifically assigned to the task by responsible officers of the International Union of Bridge and Structural Iron-workers.

Of the twenty Times employes who lost their lives in the explosion, only a few were mercifully killed outright. The position of many of the charred bodies, taken from the ruins days later, showed that, frightfully injured, others had dragged themselves to the elevator shafts and other exits, found them blocked by fallen timber and masonry, and had slowly burned to death in the holocaust that followed the dynamiting.

Churchill Harvey-Elder, assistant city editor of the Times, escaped from the building so horribly burned that he died in agony six hours later. Seventeen were more or less seriously injured, some of them maimed for life. The value of the property destroyed was in the neighborhood of \$500,000.

That crime was neither the beginning nor the ending of the war but it proved its turning point, since when the supremacy of the open shop in Los Angeles has been steadily increasing.

However, the forces which for four decades have sought by strategy and violence to enchain the industries of Los Angeles are far from being beaten or even discouraged by their long series of reverses. While their major attacks have met defeat on all fronts, they have

made formidable progress in the "organization" of many key industries—holes in the dike which, in the absence of constant vigilance, can easily spread till the whole protective barrier is swept away.

By a coincidence, it is almost exactly forty years since the first attack was made in Los Angeles on the open-shop idea, then little understood and less appreciated. Then industrially insignificant, Los Angeles saw little more than a local labor disturbance in the quickly defeated effort of the typographical union to dominate and control the printing industry here to a point where none but a union printer could get work.

It was not until the American Federation of Labor, smarting under a series of similar defeats, began to advertise Los Angeles throughout the country as the "scab city"—a place for union men and unionized industries to keep away from—that the potential significance of the open shop as a great industrial asset began to be appreciated. The boycott of Los Angeles, intended to blight the city's growth and to turn the westward tide of population and industry to the well-unionized city of San Francisco, had an effect exactly the opposite of that which its authors anticipated. It advertised the city bitterly, contemptuously and effectively, as a place where unionism was in disrepute, where a worker need not be a member of a labor organization in order to get work and where employers were "unfair" in that they refused to bar skilled artisans from employment in their factories merely because they did not carry union cards.

But the effect of this campaign was exactly the opposite of that desired and expected. Workmen in all trades who had long chafed under the autocratic dominance of the unions into which they had been forced, began trickling into Los Angeles from those cities in which the unions were strongest. Likewise capital, harassed by the same tyranny, turned to

Los Angeles as a place where employers and employes could deal freely and fairly with each other. The foundation of Los Angeles' extraordinary growth was there laid down; and the growth continues to this day, with no signs of abatement.

But what, exactly, is this issue over which so long and bitter a war has been fought? What is the open shop, or American Plan, of industrial relations? What does it mean for the wage earner, for the employer, and for the community?

On the other hand, what is the closed shop and what does it stand for? Why has Los Angeles fought so long and vigorously for the one and against the other?

No subject in the whole history of industry has been the target for so much calculated misrepresentation as the open shop. Invariably it is pictured by its opponents as something hostile to organized labor, as a capitalistic device, intended to take from the workingman something of his rights, as the antithesis of the labor union and seeking savagely to destroy it by fair means or foul. Supporters of the open shop, in consequence, are regarded by the victims of such propaganda as the enemies of the wage-earner, as industrial octopuses feeding themselves fat on the blood of underpaid and oppressed workingmen and as ever seeking the advantage of capital at the corresponding disadvantage of labor.

A great number of otherwise straight-thinking Americans seriously believe these things. There are some of such even in Los Angeles, the chief civic exponent of the open shop in America. And, of course, it is very much to the interests of closed-shop propagandists to keep them thinking so.

There never were greater misstatements of fact.

What the Open Shop Is

The open shop is not antiunion. So far from being inimical to the interests

of the workingman, it is the only industrial plan ever devised to secure for him all his rights as an American, as an individual and as one of a group.

The open shop says that there shall be no discrimination for or against any workman because he is or is not a member of a labor union. It recognizes the rights of workingmen to organize themselves into unions and, by such concerted action, to better their working conditions by any legitimate and lawful means at their command. It recognizes their right to accept employment as a group, to bargain as a group, and to strike as a group if they so elect.

The open shop denies the right of a labor union to force any worker to become a member of it by any form of coercion. It insists that every worker shall be free to join or not to join, as he sees fit, and without being penalized for either choice. It declares that an employer shall not be interfered with in his right to employ either union or non-union men or both and that he shall not be coerced in the conduct of his business by reason of his adherence to open-shop principles if he chooses so to adhere.

The open shop holds that every worker is entitled to all of his earnings to dispose of as he sees fit, without previous deductions for dues, assessments, fines or benefits at the behest of any organization unless he shall personally choose to have such deductions made. It holds that he shall be entitled to earn and to receive as much as his individual ability and industry shall make possible, without regard to how much or little any other individual may similarly be able to earn. It holds that wages shall be as high and working conditions as favorable as economic conditions justify but it denies the right of any outside organization to dictate, without regard to economic conditions, what those wages and conditions shall be.

What It Opposes

The open shop denies the right of either employers or employed to serve their personal ends by coercive tactics, violence or any other illegal means. It opposes the blacklist and the boycott equally. It opposes the unjustified lock-out as much as strike violence and illegal picketing. It is as strongly against oppressive combinations of capital as against oppressive combinations of labor. It upholds the law and the courts in their legal and orderly adjudication of labor differences, whether invoked by either side. It indorses and supports the theory of peaceful arbitration of industrial disputes.

The open shop is called the American Plan because it stands for fair play and a square deal for everybody concerned. It assures the worker the free American

right to work as he pleases, for whom and how, to earn all he can and to keep all he earns. It assures him the best wages and hours possible under the law of supply and demand. It assures him employment without interruption by walkouts arbitrarily ordered by outsiders.

It assures the employer the right to conduct his business on an economic basis, free from interruption and interference, so long as his employees are fairly treated. It assures him continuity of production through exemption from frequent and protracted labor tie-ups. It assures him of community support in his lawful self-defense when unjustifiably set upon.

Standing for peace and good will in industry, the open shop is an asset of incalculable value to any industrial community. It means factories in continuous operation, a busy and productive population, new money coming in and in fluid circulation, freedom from violence and terrorism, freedom from the evils attendant on the periodic unemployment of large numbers of workers, extensive home building, active local retail trade, impressive attractions to offer home-seekers and industries from elsewhere, contentment and prosperity generally.

That is the open shop.

The Closed Shop

The closed shop, on the other hand, insists that every worker shall be a member of a federated union, whether or not he wishes to be. It denies his right to organize or be a member of a local or company union. It insists that not only shall employers discriminate in favor of union men, but that they shall employ no nonunion labor whatever, thereby preventing the free selection of workers on a basis of merit and adaptability. It further demands that employers shall pay wages and observe working conditions and hours arbitrarily dictated by men outside the industry, without regard to economic conditions and frequently without even any knowledge of them. It further demands that the employer shall conduct other phases of his business, apart from employment, in a way to serve the interests of the union, even at the prejudice of those of the employer. His contracts, for example, must be with closed-shop concerns; his materials must be bought from and handled by closed-shop people; if he acquires from some outside source a finished piece of work of the character done by his employees, the equivalent of the labor which went into it must be repeated and paid for in his own shop, notwithstanding that such repetition is wasteful and totally unnecessary. The union dictates the number of men he must employ to do a certain amount of work and if he hires specialists to do it, the fixed number of union

men must be paid anyway, though they do absolutely nothing but collect their wages. The closed shop arbitrarily limits the number of young men who may learn a unionized trade, thereby keeping thousands out of lucrative employment. It limits the amount of work any one man may do in a day to the capacity of the least efficient man on the job. Under it, an employer may not discharge an employee without the consent of the union. It absolutely controls the members of its unions, dictating how and for whom they may work and under what conditions. It takes what it sees fit from the worker's pay envelope before the latter ever reaches him and he has no recourse. If the union official orders him to strike he must do so, without regard to his necessities or the welfare of his dependents and irrespective of his own views on the matter at issue. He may be and frequently is required to strike when his own union has no complaint whatever, this being the so-called "sympathetic strike" to support the walkout of some other union. No union man on strike may return to work without his union's consent.

Rule by Force

Because so many of its demands are absurdly illegal and contrary to every tenet of free Americanism, the closed shop can only enforce them by intimidation and violence. Federated unionism makes a hollow pretense of being law-abiding, but violence, as the accepted concomitant of strikes, is notoriously not only winked at but encouraged and directed by union officials. More, the blackest crimes in the history of industrial warfare—arson, dynamiting, maiming and wholesale murder—have been personally planned, directed, executed and paid for by local, national and international union officials. Of these not a few, but scores, have been caught, tried, convicted and given penitentiary sentences.

Conclusion

In the forty years during which Los Angeles has successfully resisted the persistent efforts, chiefly inspired from without, of unionism to fasten the closed shop upon her industries, this metropolitan area has seen approximately 150 strikes, big and little, some twenty authorized and organized boycotts and half a dozen lockouts, undertaken as defensive measures in times of serious menace.

Of the whole number, not a single strike against any important industry has been successful and the aggregate of forty years of effort has not succeeded in forcing the closed shop upon any.

Such a situation, after so prolonged and determined an effort by the country's most powerful exponents of unionism to

effect the contrary, is unique in the whole history of industry. It is especially remarkable, in the light of the practically unbroken succession of failures which have attended strikes here; failures which in nearly every instance have left the industry affected more firmly open shop than before. Disinterested analysis of the circumstances surrounding these abortive efforts makes plain two main reasons why strikes fail in Los Angeles where they might and often do succeed elsewhere.

The major cause undoubtedly is the

traditional sentiment of the community which, regardless of the economic merits—or lack of them—of the demands sought to be enforced, does not recognize or support the strike as a proper and legitimate weapon of enforcement.

Open-Shop Labor

The second reason for strike failures here is closely allied to the first. It lies in the great number of nonunion and frequently anti-union artisans of every trade who are permanent residents of Los Angeles and who constitute one of

the main defenses of the open shop. As has been seen in the great majority of the strikes described in these articles, the same thing occurs with monotonous regularity—a strike is called, the places of the strikers are promptly filled by non-union men and the industry goes on with, at most, only a temporary inconvenience. It is very seldom necessary, as in other cities, to import alien "strike-breakers"—a process in itself provocative of violence. Free labor is here at hand in sufficient quantity to keep the wheels of any industry turning.

Manganese Output in United States for 1929

There was an increase of about 30 per cent in shipments of manganese ore containing 35 per cent or more of metallic manganese from domestic mines in 1929, which totaled approximately 61,000 gross tons, valued at \$1,926,000, as compared with 46,860 gross tons, valued at \$1,214,853 in 1928, according to the United States Bureau of Mines, Department of Commerce. Shipments of metallurgical ore in 1929 amounted to about 48,000 gross tons, valued at \$1,380,000, as compared with 31,430 gross tons, valued at \$593,561 in 1928, while chemical ore shipments decreased from 15,430 gross tons, valued at \$621,292 in 1928, to about 13,000 gross tons, valued at \$546,000 in 1929.

The relatively large increase in 1929 was mainly due to the increased output from the plant of the Domestic Manganese and Development Company at Butte, Mont. This company treated in its mill about 50,000 gross tons of rhodochrosite averaging 37.6 per cent of manganese from which was produced about 30,000 gross tons of sinter averaging 57.7 per cent of manganese. During 1928 this company treated about 18,600 tons of crude ore containing 37 per cent of manganese, and obtained 11,118 gross tons of nodulized product averaging 57 per cent of manganese. Chemical ore shipments from Philipsburg amounted to 12,800 gross tons in 1929, as compared with 14,689 tons in 1928. Shipments of high-grade ore from Arkansas were about 3600 tons as in 1928; Arizona shipments decreased from 3507 gross tons in 1928 to about 2600 tons in 1929; Georgia shipments likewise decreased from 4727 tons in 1928 to 2500 tons in 1929; Idaho showed little change; New Mexico shipments increased from 2627 tons in 1928 to about 2900 tons in 1929. Tennessee shipments showed a marked increase from 55 tons in 1928 to over 500 tons in 1929, while Virginia's decreased slightly.

Figures furnished by the Bureau of Foreign and Domestic Commerce show that during the first 11 months of 1929 the United States imported 630,083 gross

tons of ore containing 308,113 gross tons of metallic manganese. Assuming that the imports for December were at the same rate as in November, the total tonnage imported would be approximately 680,000 gross tons containing 332,000 gross tons of metallic manganese, as compared with 427,708 gross tons of ore containing 207,808 tons of metallic manganese during 1928. Imports from Soviet Russia for the first 11 months amounted to 328,861 gross tons containing 168,874 gross tons of metallic manganese, compared with 159,842 gross tons containing 79,529 tons of metallic manganese in the entire year of 1928; Brazil furnished 194,335 tons containing 84,569 gross tons of metallic manganese during the first 11 months of 1929 as compared with 142,300 gross tons containing 64,290 gross tons of metallic manganese during all of 1928; imports from India amounted to 67,440 gross tons containing about 34,619 tons of manganese during the first 11 months of 1929, as compared with 83,600 tons containing 43,072 tons of metallic manganese in 1928; while British West Africa (Gold Coast) furnished 27,587 gross tons of ore containing 13,258 tons of metallic manganese for the first 11 months of 1929, as compared with 24,186 tons containing 11,712 tons of metallic manganese for the entire year 1928. The increased (over double) importation from Soviet Russia is worthy of note.

For the first 11 months of 1929 the manganese content of ferro-manganese imported was 58,956 tons as compared with 48,844 tons for the entire year 1928. Imports for the entire year 1929 are estimated at 63,600 tons of manganese content, equivalent to 79,500 tons of ferromanganese, or 150,000 tons of ore.

There was a record production of steel in 1929, estimated at 56,100,000 tons of ingots and castings, compared with 51,544,180 tons in 1928, and a consequent demand for ferromanganese and in turn for manganese ore. The estimated production of ferromanganese in

1929 is given in the Iron Trade Review of January 2, 1930, as 333,800 tons, the largest output on record, compared with 319,770 tons in 1928. The rate of consumption of manganese ore in the manufacture of ferromanganese, as reported for 1928 by ferromanganese producers, was 1.891 tons of ore per ton of product. At this rate the production of ferromanganese in 1929 would have required about 631,000 tons of ore. For this purpose the supply was ample; namely, 60,000 tons of domestic high-grade ore plus 680,000 tons of imported ore minus about 45,000 to 50,000 tons diverted for "chemical" uses, a balance of 690,000 to 695,000 tons.

About 63,600 tons of ferromanganese, equivalent to 150,000 tons of ore (figured on the same percentage of recovery as in domestic manufacture) was imported for consumption in 1929. This figure added to the requirements of domestic ferromanganese producers (631,000 tons) would indicate that the total metallurgical requirement in the United States in 1929 was probably around 781,000 tons.

Shipments of domestic ore containing from 10 to 35 per cent of manganese (ferruginous manganese ore) in 1929 were 77,000 gross tons, valued at approximately \$419,000, as compared with 90,581 tons, valued at \$407,289 in 1928. Domestic shipments of ore containing from 5 to 10 per cent of manganese in 1929 were 1,100,000 tons.

Central of Georgia to Expend \$20,000,000 in 1930

Savannah, Ga.—An expenditure of \$20,000,000 is expected to be made by the Central of Georgia Railway during the current year, according to A. E. Clift, president. More than \$12,000,000 will be expended in wages, it is estimated, \$1,500,000 in taxes, a large amount for fuel, \$2,000,000 for additions and betterments, \$1,000,000 to purchase 550 freight cars, about \$1,000,000 for 90-pound rails and various amounts for other items.



Floating Concrete Mixing Plant Used in Casting Slabs for Paving the Banks of the Mississippi River

On right and left in the foreground are two cranes, one for handling sand, the other for handling gravel. Behind the crane on the extreme right is the cement bin and a belt conveyor to handle loose cement from cement storage barges. In the center is a 110-yard sand and gravel bin. Between the sand and gravel and cement bins can be seen the two one-yard mixers. On the left of the sand and gravel bin is the power house. The equipment includes a Diesel engine and generator to furnish power for the entire plant.

Drainage and Flood Control Active Factors in South's Expansion

Recent Major Developments Here Summarized—Sewer, Waterworks and Port Improvements Keep Pace with Industrial Advancement

By CARROLL E. WILLIAMS.

A SURVEY of important construction and engineering projects of a general character undertaken or proposed in the 16 Southern States last year shows that, in addition to numerous projects completed, work is now under way on major jobs in widely scattered sections of the South, and that work will shortly be initiated on undertakings for which contracts were let in the closing weeks of 1929. In addition to the work which may logically be classed as part of last year's program, plans have been announced since the first of the year for new projects, and bonds have been voted by districts, counties and municipalities to finance such construction. Thus, it is indicated construction will go forward this year on an equal or accelerated pace on drainage, irrigation, dredging, water works, sewers, river and harbor, canalization, port and flood control projects. In keeping with the general development of the section attention is being turned to providing those facilities that make for better living conditions. Towns and cities in all parts of the South are arranging for adequate funds to expand waterworks and sewer facilities at a pace commensurate with business and industrial growth. Other projects of a like nature are designed to provide water not only for thriving towns and cities, but for agricultural development on big acreages, necessitating the building of dams to create storage reservoirs, pipe lines and canals to transport water and pumping stations to speed its movement.

Southern ports are being developed to care for the increase in commerce, resulting from concentration in this section of industries turning out a wide diversity of products. Millions of dollars are being expended for dredging channels, constructing piers, building slips, erecting warehouses, installing material handling equipment, building railway terminals and auxiliary facilities that go to make up the equipment of modern ports along the Atlantic and Gulf coasts as well as those ports on inland waterways. Also close to \$35,000,000 is being expended annually for Mississippi River flood control work by the government alone. To this sum must be added expenditures by districts, counties and states on related projects. Then, there are numerous river and harbor projects directed by the War Department, and Federal funds are often equally matched by local funds.

Projects of Magnitude and Variety Indicative of the South's Activity

THE Western Maryland Railway opened last year an \$8,500,000 waterfront terminal built for the railroad by the Port Development Commission of Baltimore with funds provided by a \$50,000,000 bond issue voted several years ago. Described by port engineers as one of the most modern and efficient seaboard terminals, the project occupies a land and water area of 60 acres, facilities including a 1700-foot pier with depressed and marginal tracks; marginal wharves, with 2-story transit sheds; 2-story supporting concrete warehouse connected with other sections of the terminal by overhead galleries. There is an area under roof of 13.75 acres and a

floor space of 920,000 square feet with storage capacity of 120,000 tons of freight and space for working and docking seven large ocean-going vessels at one time.

The Board of Levee Commissioners of the Orleans Levee District, New Orleans, recently awarded contract for a \$2,000,000 seawall along Lake Pontchartrain.

At a cost of over \$4,500,000 the Baltimore & Ohio Railroad, the Western Maryland Railway Co., and the City of Baltimore completed a railway grade crossing elimination project in the Locust Point Section of Baltimore and auxiliary improvements.

An \$80,000,000 program involving a change of the course of the Mississippi River, a scenic drive, construction of a double deck arterial highway and reclamation of five square miles of land

for park and airport purposes is proposed by the City Plan Commission of St. Louis for developing the downtown, northern and southern waterfront of that city.

The Pascagoula, Miss., section of the great seawall and boulevard system along the Mississippi Gulf Coast was dedicated in June 1929, bringing the total length of seawall up to 36 miles and the aggregate expenditure to \$5,250,000.

Mississippi Valley Flood Control Projects Attract Attention of Contractors and Machinery Firms

DURING 1929 construction was vigorously pushed on projects of a non-controversial character in connection with flood control work in the Mississippi

Summary of Some Major Southern Construction Projects

Project	Status	Cost	Location	Type of Work
Mississippi River Flood Cont'l	Under Way	\$325,000,000	Mississippi Valley	Dredging, Construction, etc.
Ohio River Canalization	Completed	125,000,000	Ohio River & Tributaries	Dredging, Locks, Power Dams
Waterfront Improvements	Proposed	80,000,000	St. Louis, Missouri	Parks, Streets, Airports, etc.
Lakefront Developments	Under Way	40,000,000	New Orleans, La.	Dredging, Seawalls, Streets
Flood Control at Dallas	Under Way	18,000,000	Dallas, Texas	Dredging, Roads, Bridges, etc.
Sewer and Drainage	Under Way	15,000,000	New Orleans, La.	Canals, Pumping Plants, etc.
Water Works	Completed	12,000,000	St. Louis, Mo.	Pumping Plants, etc.
Sewers	Under Way	10,000,000	St. Louis, Mo.	River des Peres Sewer, etc.
Sewer	Proposed	10,000,000	Louisville, Ky.	System for City
Sewer	Proposed	9,000,000	Houston, Texas	General System
Inland Waterway	Completed	9,000,000	Norfolk to Beaufort, N. C.	Canalization
Terminal	Completed	8,500,000	Baltimore, Md.	Rail Terminal, Piers
Willacy County Irrigation	Under Way	7,500,000	near Raymondville, Texas	Irrigation Works
Tarrant County Irrigation	Under Way	6,500,000	near Fort Worth, Texas	Irrigation, Water Works, etc.
La Salle County Irrigation	Under Way	6,000,000	Cotulla, Texas	Irrigation Works
Port Improvements	Completed	6,000,000	Port Everglades, Fla.	Dredging, Breakwater, Slips
Maverick County Irrigation	Proposed	6,000,000	Maverick County, Texas	Irrigation Works, Hydro Plant
Seawall	Completed	5,250,000	near Pascagoula, Miss.	Seawall and Streets
Florida East Coast Canal	Proposed	4,221,000	Florida	Dredging
Hidalgo County Irrigation	Under Way	4,000,000	Hidalgo County, Texas	Irrigation Works
Water System	Under Way	3,000,000	St. Petersburg, Fla.	Pipeline, Pumps, etc.
Water Supply Dam	Proposed	3,000,000	Gunpowder River, Md.	Storage Dam
Sewer	Proposed	3,000,000	Birmingham, Ala.	Channel Improvements
Brownwood Water District	Under Way	2,500,000	near Brownwood, Texas	Irrigation Works
Water Works	Completed	2,500,000	Waco, Texas	Supply System
Cameron County Irrigation	Proposed	1,600,000	near Point Isabel, Texas	Reservoir, Canals, Pumps
Starr County Water Control	Proposed	1,500,000	near Aroma, Texas	Irrigation Works
Sewers	Proposed	1,300,000	Tulsa, Okla.	General Expansion
Water Works	Proposed	1,250,000	Kenner, La.	General Improvements
Sewer	Proposed	1,200,000	Owensboro, Ky.	City System
Water Works	Proposed	1,000,000	Oklahoma City, Okla.	Reservoir
Water Works and Sewers	Proposed	1,000,000	Montgomery, Ala.	General
Water Works	Completed	800,000	Fort Lauderdale, Fla.	Water System
Sewers	Proposed	800,000	Knoxville, Tenn.	General Improvements
Water and Sewers	Under Way	750,000	Hattiesburg, Miss.	General Improvements
Water Works	Completed	700,000	Monroe, La.	Water Supply System
Sewer	Proposed	600,000	Asheville, N. C.	Sewer Line
Water and Sewer	Under Way	500,000	Sweetwater, Texas	General
Sewers	Under Way	500,000	Jacksonville, Fla.	Bulkheading, Pumps, etc.
Sewers	Proposed	500,000	Harlingen, Texas	General Improvements
Water and Sewers	Proposed	500,000	Laurel, Miss.	General Improvements
Water Works	Proposed	500,000	Shreveport, La.	General
Water Works	Proposed	500,000	Birmingham, Ala.	Extensions



Power Shovel Loading Specially Designed Crawler Wagon

These wagons designed and built by the Kaiser Paving Co., Memphis, Tenn., and Oakland, Cal., have a capacity of 12-yards each. They have no front wheels and hitch direct to the tractor, a Caterpillar "60". A P. & H. Model-700 shovel is here shown. Later it was converted into a dragline for handling levee building material from deep pits, nearby surface material having been exhausted.

Valley under the direction of the United States Army Engineer Corps. Congress made more than \$325,000,000 available for this work. In the fiscal year ending June 30, 1930, approximately \$30,000,000 will be expended and thereafter it is proposed to expend about \$35,000,000 annually. While numerous phases of the work as outlined have been held up pending an investigation of the program as initiated under General Jadwin, contracts have been let and work has been under way for many months on scores of important projects. In the aggregate a big volume of this class of work has been undertaken since the devastating flood of 1927. Initially efforts were concentrated by government forces and private contractors on repairs to flood control structures destroyed or weakened. Then attention was centered on projects deemed essential if further serious floods are to be avoided. This program involved the letting of contracts for strengthening many miles of levees that withstood the last flood but are incapable of holding against the indicated maximum flood. This introduced many new problems. In the first place nearby borrow pits have been exhausted by the building of present levees, so that it has been necessary to go far afield for materials. The recent flood showed the necessity for raising the height of levees and increasing their cross section. This called for new methods of material handling and construction, and contractors and machinery manufacturers cooperated closely in the development of new methods and the adaptation of specially designed machinery to the work. There was a noticeable trend towards mechanization of all units engaged in levee building work with the result that mule teams have largely been replaced by gasoline and fuel oil and electric powered tractors and other power units. Crawler type wagons, power excavators, crawler type

drag lines, tractors of many types, industrial railway outfits and a wide variety of power tools are now used in an effort to keep costs within bounds and to speed completion of the various jobs. Last year several outstanding successes were recorded in the development of new construction methods for such projects and this year even further strides are indicated. Hydraulic building of levees has been proved economically feasible.

Levee work has not been the only phase of flood control undertaken, however. Dredging of channels, erection of dikes and building of contraction works, diversion projects and auxiliary improvements have been undertaken. One of the biggest individual jobs is the building of the Bonnet Carré spillway near New Orleans to divert flood waters from the Mississippi River above the city through

an artificial channel six miles long and a mile and a half wide into Lake Pontchartrain and thence into the Gulf, the idea being to keep the water level at New Orleans at a safe stage. Approximately \$13,000,000 will be expended at this point alone by the Government. Because the floodway passes over rights of way of important railroad lines and highways entering New Orleans a great expenditure will be necessary to provide new means of access to the city.

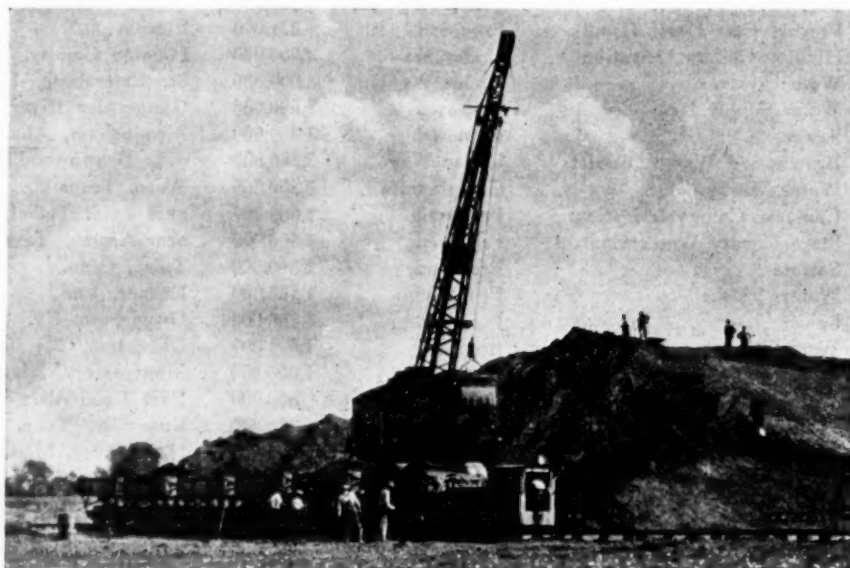
Aerial photography has entered the picture in facilitating preparation of maps in connection with flood control work. For instance, in mapping an area of about 8000 square miles in Tennessee, Mississippi, Kentucky, Missouri and Arkansas, 12,000 negatives were exposed and four pilots and four photographers flew about 50,000 miles in 90 days.

Great Dredging and Irrigation Projects Under Way and Proposed

WITH the sale of bonds last year by the Florida Inland Navigation District for the purchase of the Florida East Coast Canal and turning over the right-of-way to the Government the way is paved for the expenditure of \$4,221,000 by the Government to improve the property, and \$125,000 will be expended annually for maintenance.

The last dam in a \$125,000,000 project providing a 9-foot channel over a length of 980 miles in the Ohio River from Pittsburgh, Pa., to Cairo, Ill., and requiring approximately 50 years to accomplish was completed last year.

An outstanding construction project is that at Dallas, Texas, calling for an



Radical Departure From Old-Time Levee Building Methods

Use of draglines and industrial railway has speeded construction of levees of large cross section. A train of six 4-yard Western cars pulled by a 4-ton Vulcan locomotive and a 30-B Bucyrus machine are shown here on a Canal Construction Co. job near Lake Cormorant, Miss.

expenditure of \$18,000,000 for controlling the flood waters of the Trinity River and the reclamation of about 10,000 acres for business, warehouse and manufacturing sites and joining the city and reclaimed areas with thoroughfares, boulevards and traffic ways. Work is being financed by the issuance of \$6,500,000 bonds for levees, channels, pumping plants, etc., and the City of Dallas and Dallas County plan to expend a total of \$6,500,000 while railroads and public utilities will expend over \$3,000,000. New streets, sewer and water lines, etc., will necessitate a big expenditure.

Work was pushed throughout 1929 on the \$40,000,000 lake front development in Lake Pontchartrain under the supervision of the Board of Levee Commissioners of the Orleans Levee District, including the building of bulkheads, hydraulic fills, a bathing beach, bulkhead and allied improvements.

Maverick County Water Improvement District No. 1, Eagle Pass, Texas, proposed a \$6,000,000 irrigation and hydroelectric power project on the Rio Grande River to develop 60,000 to 100,000 acres. Hidalgo County Water Control District No. 1, Edinburg, Texas, in December marketed \$1,500,000 bonds to finance improvements which will ultimately involve the expenditure of \$4,000,000 for reclaiming about 70,000 acres. In November plans were announced for a \$2,500,000 water and irrigation project for Brownwood (Texas) Water District No. 1. Improvement District No. 9 of Hidalgo and Cameron Counties, Texas, in September voted \$3,500,000 bonds to purchase a privately owned irrigation system serving 100,000 acres of land.

Tarrant County Water Control and Improvement District, Fort Worth, Tex., sold a portion of a \$6,500,000 bond issue in September for building dams and levees for flood control works on the



Constructing a Bulwark Against Mississippi River Overflow

These Caterpillar Tractors are utilized night and day by Lawrence Brothers, levee contractors of Memphis

river through Fort Worth, to insure an enlarged supply of water for the city and industries, and to provide water for irrigating about 55,000 acres of land in Tarrant and Wise Counties. Willacy County Water Improvement District No. 1, Raymondville, Texas, proposes expending \$7,500,000 for irrigating 88,000 acres of land to be completed in a six-year period. The La Salle County Water Improvement District No. 1, of Texas, pushed work last year on a \$6,000,000 project at Cotulla, Texas.

The inland waterway from Norfolk, Va., to Beaufort, N. C., a distance of 200 miles was completed last year at a cost of \$9,000,000.

Port Everglades, Fla., in Broward County between Miami and Palm Beach, was about completed last year by the Broward County Port District. The project comprises an entrance channel 200 feet wide and 6900 feet long, an entrance basin of 14 acres, a turning basin of 25 acres, a slip 300 feet by 1200 feet, steel sheet piling around the entrance basin, steel sheet piling and concrete bulkheads

around the slip, two inner jetties 1,000 feet long and the mats of two breakwaters, 4200 feet long.

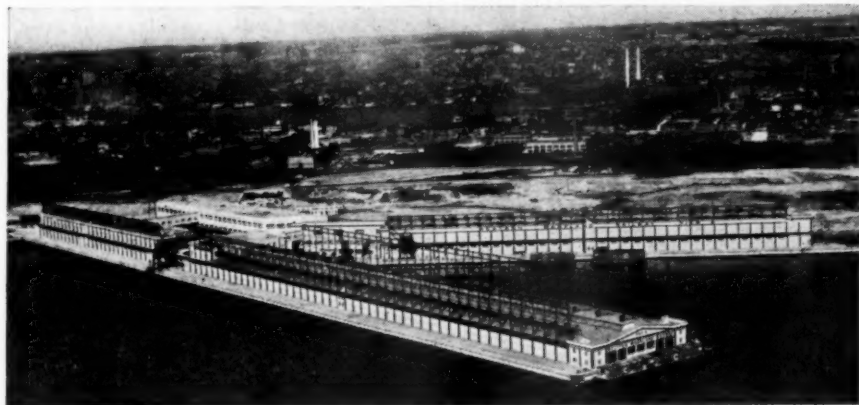
The Brazos River Harbor Navigation District pushed work last year on developing the Freeport harbor.

Sewer and Water Facilities Being Expanded in Keeping With Growth of Towns and Cities

SOUTHERN towns and cities are expending huge sums of money in providing adequate supplies of water for domestic and industrial purposes. Kingsport, Tenn., last year completed a supplemental water supply system. Monroe, La., expended \$700,000 for waterworks improvements. New Orleans is expending \$15,000,000 in sewer and water projects planned for a 3-year period. At St. Petersburg, Fla., \$3,000,000 is being expended to insure a soft water supply. East Bank Water District No. 1, Kenner, La., in July voted \$1,250,000 for waterworks and fire defense improvements. Baltimore City will expend \$3,000,000 for the proposed Prettyboy Dam on the Upper Gunpowder River in Baltimore County. St. Louis, Mo., completed a \$12,000,000 waterworks project at Howard's Bend on the Missouri River. At Waco, Texas, work was pushed during 1929 on \$2,500,000 waterworks improvements. Sweetwater, Texas, is expending \$500,000 for waterworks and sewer projects. Charleston, S. C. last year completed a new water supply system, an outstanding feature being a 4½-mile tunnel through marl.

St. Louis, Mo., is completing the River Des Peres sewer project, estimated to involve the expenditure of \$10,000,000. Louisville, Ky., started work last year on sewer improvements to cost \$10,000,000. Owensboro, Ky., sold \$1,200,000 bonds to finance sewer construction.

New Orleans is extending its drainage system and installing a battery of big pumps estimated to involve the expenditure of \$6,500,000.



Air View of Recently Completed Western Maryland Railway Terminal at Baltimore

This \$8,500,000 terminal project is leased by the railway from the City of Baltimore, funds for its erection having been provided from a \$50,000,000 bond issue voted several years ago by the municipality for harbor improvements. The J. E. Greiner Co., Baltimore, were consulting engineers. Contractors included: Empire Construction Co., Baltimore; Merritt-Chapman & Scott Corp., Baltimore and New York; The Mullan Contracting Co., Baltimore; The North-Eastern Construction Co., Baltimore; P. C. Streett Engineering Co., Baltimore; The Wellman-Seaver-Morgan Co., Cleveland, Ohio, and the Arundel Corp., Baltimore.

\$500,000 Publicity Fund Feature of Plan to Accelerate Building Activity

Representatives of Trade Associations Sponsor Movement to Speed New Building Projects and Big-Scale Modernization Program—Own Your Own Home Campaign to be Inaugurated

[Special Correspondence Manufacturers Record.]

Washington, January 27.

MORE than 100 representatives of 80 organizations, comprising building supply and material enterprises, building trades employment councils, contractors associations, building and loan and similar financial associations, architectural institutions and allied interests, at a meeting in Washington last week to discuss practical methods for contributing to the national movement for maintenance of commercial and industrial progress, formally approved a plan to expend \$500,000 in a nationwide campaign to point out the present favorable conditions for undertaking essential new building and remodeling projects. Accordingly an executive committee of representatives of all the interests within the building industry was appointed to adopt measures for carrying out the program for a united campaign to stimulate construction. Fenton B. Turek, vice-president of the American Radiator Co., New York, representing the Plumbing and Heating Industries Bureau, was chosen general chairman. The group will be designated as the National Building Survey Conference.

The conference was called at the request of a number of representatives of the building industries by Julius H. Barnes, chairman of the National Business Survey Conference, created at the suggestion of President Hoover. It is said to mark the first time any such group of competing units within the building industry has come together of its own volition to discuss cooperative action in the interest of the general welfare. The temper of the conferees seemed to be that the general period of emergency had passed, but that the stock market slump had created a psychological reaction that would have to be treated not only with the President's prescription of "Work"—but that the remedy need be applied *fast*. Thus, the keynote of the meeting was to "Work Fast."

Practically all in attendance were in agreement as to an assured big volume of construction and building work in the last nine months of 1930, but the imperative need for undertaking essential projects now to give employment to thousands in the building trades and to stimulate purchase of materials and equipment was emphasized. It was pointed out that, whereas projects now planned and on which contracts will be let in April and May by city, state and federal governments and private enterprises, utilities and railways insure a formidable volume of work later in the year, general conditions would be immeasurably improved if projects now held in abeyance are promptly undertaken along with remodeling and modernizing existing structures of all types.

The conference also recommended two other steps in continuing the campaign to keep business on an even keel. One was the creation of a research group to keep close contact with building needs in various sections. The other provided for creation of a special finance committee to encourage the making available of funds for building, remodeling and modernizing, and to attract into building channels funds recently diverted to speculative fields.

To Spur Building of New Houses and Remodeling Existing Structures

IT WAS AGREED that one of the first things the construction industry must do is to assure the public that conditions in the country are basically sound and that building material and labor costs are in line with commodity prices generally and such as to insure security. The financial problem must also be solved, it was emphasized, so that money may be made available at favorable rates for all essential construction. A widespread promotion of home building will, it is believed, suffice to stimulate the flow of money to

proper channels for this purpose. Residential construction fell off sharply in 1929, the group was informed, the decline in valuation of contracts awarded in 1929 for this class of work as compared with contracts for similar construction in 1928 being variously estimated at from \$500,000,000 to \$800,000,000. Thus, efforts will be initially concentrated on revivifying house construction, and to that end a nationwide "Own your own home" publicity and advertising campaign will stress the advantages and desirability of home ownership. Big scale activities in modernizing and remodeling structures of all types will be encour-

aged, and efforts will be concentrated on stimulating such work, particularly on the part of city, county and state governments. This type of work can be undertaken within a short period of time, it is pointed out, whereas new construction projects must necessarily await completion of detailed plans and specifications, acquisition of sites, calling for bids, letting of contracts, etc.

Government Takes Steps to Expedite Construction Activities

DR. JOHN M. GRIES, chief of the new division of public construction of the Department of Commerce, explained the efforts the government is putting forth to remove the barriers that interfere with or delay proposed and authorized construction. "Federal, state, municipal and county governments are busy pushing projects out into the construction current daily," said he. "Many projects which had been planned had not advanced beyond that stage. Some were hopelessly lodged on the rocks. Others were in still water, while others had sunk. Now, everywhere, public officials responsible for construction are initiating work previously planned and are trying to remove restrictions, so that work may go forward uninterruptedly at an early date. Their efforts are meeting with success." Dr. Gries described the construction industry as the "balance wheel of American business." He declared that already several hundred million dollars worth of construction work had been expedited by the nationwide emphasis on the need for accelerating building activities. For instance, said he, the United States Veterans Bureau has awarded this month contracts for several hospitals for which lettings had originally been scheduled for May. The passage of the bill to permit private architects to prepare plans for federal buildings will further facilitate speeding up such work, declared Dr. Gries.

Commerce Secretary Sees Skies Brightening and Emphasizes Importance of Home Building

SECRETARY OF COMMERCE, Robert P. Lamont, in addressing the group, announced that a survey of proposed expenditures by the federal, state and local governments for public works this year

will necessitate an outlay of \$3,325,000. Mr. Lamont stressed the need for encouraging residential construction and in this connection pointed out that perhaps 70 per cent of our national expenditures is for other than necessities, and therefore suggested that the construction industry consider the possibilities of attracting some of that percentage in the direction of home buying. Sound principles of merchandising should be the order of the day, declared Mr. Lamont, who urged the American people be "sold on the home-building and home-owning idea," for the competition for the buyer's dollar is extremely keen and luxuries now seem most successful in attracting buyers. The present administration, said the Secretary, is thoroughly committed to encouraging home ownership and believes that better homes for America will go far towards solving many of the problems we now face. From various cities have come reports that vacancies in the least desirable types of houses have increased steadily during the past few years.

"Broadly speaking, your job is to survey the market as it stands today, both supply and demand, and to see what you can do to widen the demand," Mr. Lamont stated. "The commodity that you as a group offer to the American people is dwellings, the homes in which they live. More than half of the homes are rented, and for those you may convince the owners that it will pay to improve them. If you set out to sell the idea of the whole house to American families, you will affect not only the market for new houses and the demand for remodeling and modernizing existing houses in the hands of individual owners, but also the improvements that may be made by landlords. The principle is becoming more and more recognized in the broader strategy of salesmanship that customers should be and should remain satisfied with their purchases. The idea of selling a man a house he cannot pay for has been justly condemned as bad business by the great bulk of leading real estate firms. It has been suggested that the American people are not sufficiently well aware of the value of a home as an investment. I do not mean, necessarily, that it is worth so much for a man to own his home that he need not be concerned as to whether or not he is getting his money's worth. There is a real need in most communities for agencies from which home owners can obtain disinterested advice."

Secretary Lamont stressed the need for rapid restoration of financing facilities up to the point where they were before the drain from the security markets was felt and pointed out the desirability of improving the second mortgage situation, although, he cautioned, the complete solu-

tion may require years of effort, supplemented by research and changes in laws.

Improved Conditions in Money Market Noted

THE MANNER in which recent bond issues have been subscribed at favorable rates is a good sign that money conditions are becoming better, said B. J. Mullaney, president of the American Gas Association. There is no indication of curtailed expansion in the gas industry, he announced, the construction budget for 1930 calling for an expenditure of about \$500,000,000 for new construction and maintenance. He urged concentrated effort to put before the country the idea that now is the time to build, because of favorable labor and material costs, coupled with the ability to obtain funds at fair rates.

Plan to Rout Rumors with Facts Seen As Big Factor in Restoration of Normal Activities

THE NEED FOR ROUTING rumors with facts was heralded as a prime factor in restoring business confidence. No slump in commodity prices followed the drastic deflation in the stock market, and no general cutting of wages resulted, it was pointed out. The situation, therefore, in the opinion of the leaders at the conference calls for sane confidence and tempered optimism to preclude unwise restriction of industrial expansion and construction activity, inspired through fear. High light surveys initiated by President Hoover in important fields of activities have been followed up by intensive investigations in the respective industries and both clearly indicate that the construction industry holds the key to the solution of the problems now confronting business, and that the danger of a widespread business reaction may be avoided if business men and government officials adhere to their programs of progress and their public and private building plans as mapped out last fall and move forward instead of restricting operations. It appears that there is a growing appreciation of the fact that consumption regulates production, and that with adequate buying power trade must go ahead. In this connection, it should be considered that whereas in the last great period of depression employers cut wages, it is now generally conceded to be poor business to destroy the buying power of consumers. In fact, several industrial leaders, after conferences with President Hoover, cancelled plans for wage cuts and gave orders to go forward with business as usual.

Power Consumption Indicates Increased Business and Industrial Activity

M. S. SLOAN, president of the National Electric Light Association, in a telegram to the group, announced that

the production of electricity in November, 1929, was 6.3 per cent higher than in the same month of 1928, and that power consumption increased 5 per cent, small users, 12½ per cent, and household use, 15.4 per cent. December production increased 6 per cent, but an analysis by users is not yet available. Reports for the first two weeks in January show increased consumption as compared with the same period last year. It was emphasized that figures for the power industry are a valuable criterion of business and industrial activity, since practically all communities regardless of size are served and 70 per cent of the country's households are consumers. It was announced that the estimated total expenditure this year of \$865,000,000 by the power industry, as reported to President Hoover, will be largely exceeded.

Favorable Building Association Outlook

H. F. CELLARIUS, secretary of the United States League of Building & Loan Associations, Cincinnati, Ohio, reported that within recent weeks the outlook for building associations throughout the country has tremendously improved, and that according to present indications, within three months normal conditions will prevail. In September it looked as though six months would be required to restore normal business in this line, said Mr. Cellarius. Normally such associations provide \$2,000,000,000 annually for home building and buying, but due to the depression in the stock market this figure last year had dropped to about \$1,850,000,000.

The need for a Federal Home Loan Bank to facilitate home owning and buying was discussed, and it was suggested that efforts be made to have the Federal Reserve Board rediscount such paper. The issuance of bonds repayable at the rate of about 10 per cent annually was also broached as of possible assistance in reducing cost of financing residential building.

Representatives of the brick industry stressed the need for reasonable rates of interest, low finance charges and small down payments to encourage home ownership. They declared that national banks are not in the humor to loan money on mortgages, although they are privileged now to do so.

Resolution Adopted on Modernization

THE GROUP ADOPTED the following resolution:

"This conference recommends that in every community of this country there be undertaken at once concerted action looking towards an immediate program of maintenance, repairs and equipment work with respect to existing homes and other buildings in the interest not alone of immediate employment of a large number of people but in the conservation of property."

Contractors of Nation Hold Conference in New Orleans

The eleventh annual convention of the Associated General Contractors of America, held last week at the Hotel Jung in New Orleans, drew a large attendance, about 500 contractors assembling from many parts of the country.

A broad range of the contractors' interests was discussed by T. T. Flagler, retiring president of the Association. He said that business as a whole has come to realize that the building industry is the key to the entire economic structure. Mr. Hoover had realized this, he said, and had taken it into account in planning his business stimulation conferences.

Publicity, the speaker declared, should be a most important consideration for the coming year. He urged larger appropriations for this purpose, declaring that this phase of the Association's activities had been neglected and inadequately financed in the past. The year just completed, Mr. Flagler said, had been an unprofitable one for the contractors as a whole due partly, he believed, to cut-throat competitive bidding. Vigorous action by

the Association had been rewarded by considerable progress in combatting this tendency.

Progress was reported also in the effort to raise the standard of ethics of the contracting business. Contractors, the speaker declared, are becoming more honorable, and the general tendency to specialization is manifest in the development of highly specialized staffs of engineers by large contractors. The calling of the builder has reached the status of a profession.

The year's activities of the Association were reviewed by its general manager, Col. George B. Walbridge. The speaker stressed the importance to the contractors of the country of the business stimulation conferences called by President Hoover and the results that had come from them. Col. Walbridge said it had become evident also that without a strong and well-financed co-operative body the general contractors will receive little consideration from either the government or other industries. Two repre-

sentatives of the Association have therefore been appointed to serve on the conference committee of the United States Chamber of Commerce.

The speaker described the work of the bureau, created at the 1925 convention, to cooperate with the bonding companies in an effort to keep contracts out of the hands of unreliable and irresponsible contractors. The surety companies have co-operated most wholeheartedly, he said, and if the contractors do their part equally well, success is assured.

Accident prevention was the subject of a talk by John W. Cowper, president of the John W. Cowper Company, Buffalo, N. Y. Mr. Cowper discussed methods of accident prevention, and said that signs designed to warn men against risks should be changed every day, as any warning read too often lost its force. He urged the need of cooperative and group insurance and described the large savings that can be made thereby.

The four-day convention closed on Thursday, January 23, after electing officers for the coming year. A. E. Horst of Rock Island, Ill., is the new president and James E. Cashman, Burlington, Vt., the new vice-president.

NATURAL GAS TO ATLANTA

Last Link Completed in Main Line of \$35,000,000 Carrier from Louisiana Gas Fields

Atlanta, Ga.—The final link in the 450 mile pipe line from the Monroe gas fields of Louisiana has been laid on the outskirts of Atlanta and natural gas has been brought in under heavy pressure. The line is being built by the Southern Natural Gas Corporation, J. H. White, president, Birmingham, Ala., at a cost of approximately \$35,000,000 and will supply natural gas to many cities and communities and individual large industries along the route. It is estimated that the system will be capable of developing a capacity of 150,000,000 cubic feet at a pressure of 350 pounds. Compressor systems have been installed at various points along the route, the nearest one to Atlanta, being at Reform, Ala. Construction of the line is being handled by Ford, Bacon & Davis, New York.

Masonic Temple for Washington

Washington, D. C.—The Masonic Fraternity of this city, with headquarters at 13th street and New York avenue, northwest, is considering the erection of a new Masonic Temple to cost several million dollars, although nothing definite has been determined. Preliminary studies are being made by Corbett, Har-

ris & MacMurray, New York, architects, and Frank G. Pierson, Washington, associate architect. Gratz Dunkum is the chairman of the building committee.

H. K. Ferguson Company Opens Baltimore Branch

The H. K. Ferguson Company of Cleveland, Ohio, internationally known firm of engineers and builders, opens a Baltimore branch office to more adequately handle its growing Southern interests. Space has been leased in the new Baltimore Trust building by R. E. J. Summers, vice-president and contract manager of the Ferguson organization, who is to be in personal charge of his company's local headquarters.

Mr. Summers stated that decision to locate in Baltimore was made after his organization had become thoroughly impressed with the possibilities of Baltimore as a center of industrial expansion, and said: "No small factor in our decision has been the cordial cooperation we have met in our extensive dealings with Baltimore concerns in connection with our work at Point Breeze for the Western Electric Company.

"As engineers and builders operating on a world-wide scale," he declared, "we are in close touch with many major industrial developments at their source. We are frequently called upon to assist our clients in locating new plants or branch facilities."

British Cotton Shipments Lower in 1929

Exports of cotton yarns and manufactures from the United Kingdom for the 12 months ended December were £135,449,008 and £573,833,362 against £145,302,215 and £578,869,321 in 1928.

Shipments of cotton piece goods for the 12 months ended December were £90,263,987 and 3,671,686,500 square yards against £107,298,462 and 3,866,499,700 square yards in 1928. Quantities taken by the leading markets and the increases or decreases in thousands of square yards are shown in the following:

	12 months ended Dec. 31, 1929	12 months ended Dec. 31, 1928	Compared with 1928
			Increase Decrease
Bengal, Assam, Bihar and Orissa..	687,826	.....	22,286
Bombay	511,978	.....	175,675
Australia	169,892	26,882	.....
Egypt	151,619	22,949	.....
China	149,516	.....	3,883
Argentine Republic.	144,152	.....	4,770
British West Africa	123,607	.....	22,409
Dutch East Indies.	120,173	.....	22,885
Madras	108,049	15,799	.....
Switzerland	88,562	.....	31,105
Straits Settlements and Malay States	82,929	20,368	.....
British S'th Africa	71,681	2,491	.....
Burmah	66,326	14,558	.....
Netherlands	64,627	.....	1,562
Foreign West Africa	57,221	.....	7,191
Morocco	57,029	.....	5,371
Turkey	52,971	.....	2,260
Chile	49,919	22,294	.....
Germany	47,044	.....	5,567
Colombia	41,842	700	.....

Cotton yarns shipped during the 12 months ended December were £20,753,279 and 166,636,700 pounds, compared with £22,566,494 and 169,206,900 pounds in 1928.

Nearly \$3,000,000,000 Invested by Life Insurance Companies in the South

By HOWARD L. CLARK

IN the course of an address on "Stabilizing Life Through Life Insurance," made before the recent annual convention of the Association of Life Insurance Presidents, Frederick H. Ecker, president of the Metropolitan Life Insurance Co., New York, cited some figures which directly contributed to stabilization in the investment field. The huge sums invested in response to the nation's need for business and credit represent the reserve funds of the life insurance companies after dispersing hundreds of millions (\$864,000,000 in 1928) in payment of death claims, matured endowments, annuities, and disability benefits.

The investment reserves of 52 legal reserve life insurance companies, representing approximately 92 per cent of the admitted assets of all United States life insurance companies, were \$14,689,000,000 in 1928 and \$16,150,000,000 in 1929. It is estimated that the aggregate assets of all United States life insurance companies at the close of 1929 were \$17,600,000,000. The vast total of admitted assets of the 52 companies was divided as follows:

Class of investment	Amount
Farm mortgages	\$1,916,000,000
Other mortgages	4,831,000,000
Total mortgages	\$6,747,000,000
United States Government bonds	\$366,000,000
State, county and municipal bonds	558,000,000
Total government bonds, including foreign countries...	\$1,330,000,000
Railroad bonds and stocks....	\$2,884,000,000
Public utility bonds and stocks	1,448,000,000
Other bonds and stocks.....	423,000,000
Total bonds and stocks.....	\$6,085,000,000
Policy loans and premium notes	2,114,000,000
Total, including other assets..	\$16,150,000,000

The ratio of total mortgage investments, amounting to \$6,747,000,000, of

life insurance companies to total assets was 40 per cent, nearly 12 per cent of which represented farm mortgages. The percentage of investments in government bonds, including the bonds of foreign countries, was 8 per cent. Public utility bonds and stocks was 9 per cent, while the total ratio of all private and public bond and stock investments, amounting to \$6,085,000,000, of life insurance companies to their total investments was over 37 per cent. One feature of the tabulation reveals that policy loans and premium notes due to life insurance companies amounted to \$2,114,000,000, or 13 per cent of the total assets of the 52 life insurance companies reporting.

In presenting the statistics which covered five-year periods from 1906 to 1921, and annually thereafter, there was also included a tabulation of investments by geographic divisions for the year 1928. From the latter tabulation one can secure a fair idea of the extent of the investments of life insurance companies in the Southern states, as outlined in the accompanying compilation by the MANUFACTURERS RECORD.

The aggregate investments at the end of 1928 in the three enumerated geographical regions of the South were \$2,917,473,000. The amount invested in Southern mortgages was \$1,118,845,000, or 38 per cent of the life insurance companies' total investments in the South. Southern farm mortgages accounted for \$354,649,000 and other mortgages on Southern property amounted to \$764,196,000. The total amount invested in Southern bonds and stock was \$1,339,415,000, or nearly 46 per cent of the entire Southern investment of the 52 legal reserve life insurance companies reporting, which, as stated, represent 92 per cent of all United States companies. Southern rail-

road stocks and bonds headed the list of this class of investments with \$782,323,000, followed by \$210,417,000 in Southern public utility bonds and stocks, and \$194,821,000 in Southern state, county and municipal bonds. One item of interest is that Southern life insurance companies own \$36,000,000 of Southern real estate and had on December 31, 1928, \$8,475,000 cash in Southern banks. With the estimated increase of \$1,500,000,000 in life insurance assets since 1928, it may be reasonably assumed that the total investments in the South have proportionately increased for 1929, since no absolute figures are available by states at this time.

In previous issues of the MANUFACTURERS RECORD we have pointed out the great increase in life insurance business and the part that life insurance plays in the investment field of the nation. The American people purchased \$19,800,000,000 of life insurance protection during 1929, an increase of \$1,100,000,000 over 1928, and the total insurance in force throughout the country is now estimated at \$103,600,000,000, with approximately 67,000,000 policyholders in the United States, truly a gigantic business and a stabilizing force of immeasurable benefit in the nation's welfare.

But after all, the part played by the great life insurance companies of the land in promoting better health through their research activities cannot be measured in dollars and cents. This subject was discussed in an address by Gerard S. Nollen, president of the Bankers Life Company, Des Moines, Iowa, at the last meeting of the Association of Life Insurance Presidents, when he took for his topic "The Health Account on the National Ledger." Mr. Nollen said:

"There is involved in this problem a general economic principle which must be taken into account in presenting an accurate picture of the situation. Individual economic independence no longer exists. Because of this complete interdependence each citizen is vitally interested in the wealth-producing power of the nation as a whole which, of course, resolves itself into the wealth-producing power of the individual citizens of the nation. The greater the wealth of the nation the greater the opportunity available to every citizen to share in the enjoyment of that wealth. Therefore, if through proper health conservation measures the wealth-producing power of the nation can be increased, the resultant benefit will be available to every citizen. This means in turn that each one of us has a vital, selfish, as well as altruistic interest in conserving the health of every other citizen."

INVESTMENTS OF LEGAL RESERVE LIFE INSURANCE COMPANIES IN THE SOUTH.

	(December 31, 1928.)	East South	West South	Grand
	South Atlantic States	Central States	Central States	Total South
Investments	\$1,321,190,000	\$760,861,000	\$835,422,000	\$2,917,473,000
Farm mortgages	\$54,134,000	\$95,504,000	\$205,011,000	\$354,649,000
Other mortgages	427,326,000	184,064,000	152,806,000	764,196,000
Total mortgages	\$481,460,000	\$279,568,000	\$357,817,000	\$1,118,845,000
Government bonds	\$52,711,000	\$30,725,000	\$38,524,000	\$121,960,000
State, county, municipal and foreign government bonds.....	93,664,000	44,171,000	56,986,000	194,821,000
Railroad bonds and stocks.....	345,411,000	224,804,000	212,108,000	782,323,000
Public utility bonds and stocks...	102,034,000	58,893,000	49,490,000	210,417,000
Other bonds and stocks.....	10,525,000	7,387,000	11,982,000	29,894,000
Total bonds and stocks.....	\$604,345,000	\$365,980,000	\$369,090,000	\$1,339,415,000
Policy loans and premium notes..	\$210,768,000	\$103,114,000	\$96,915,000	\$410,797,000
Real estate	20,502,000	7,867,000	7,706,000	36,075,000
Collateral loans	661,000	280,000	1,993,000	2,934,000
Cash	3,074,000	3,830,000	1,571,000	8,475,000
Other ledger assets.....	380,000	222,000	330,000	932,000

Broad Problems of Highway Economics Claim Attention of Road-Builders

Delegates to Recent Atlantic City Convention Discuss Diversity of Subjects Outside Engineering and Construction Phases of Activities—New Concept of Filling Transportation Needs of Country Seems Awakened

[Special Correspondence Manufacturers Record.]

Atlantic City, N. J., January 25.

THE highway builder is thinking in terms of motor vehicle transportation service. Moreover, he is keenly interested in solving the problems of highway finance, and in construction of roads on an economic basis. The politician is slowly yielding ground to the trained highway engineer in matters of planning, locating and building highways. Haphazard spending for road-building may soon be a thing of the past. The broader problems of scientific highway planning; of utilization to best advantage the existing road facilities; of research to develop types of roads and structures best suited to modern traffic needs; of perfecting details of administration and organization; of cooperative effort on the part of district, county, city and state and federal officials in planning, financing and constructing roads as part of a coordinated, efficient and economical transportation system—these and other subjects outside the general scope of highway engineering claimed a large part of the attention of the 58 committee sessions of the twenty-seventh annual convention of the American Road Builders Association held here last week. That road builders have to a large extent right-about-faced in studying problems confronting the industry is indicated by an examination of the titles of the various papers presented at last week's sessions. Further, the number of delegates who attended committee meetings to hear reports prepared during the past year and to discuss them openly set a new high record. It appears that road officials, highway contractors and manufacturers of road-building machinery and equipment have come to look at themselves not so much as units in their comparatively narrow and restricted sphere of operations, but as factors in the \$2,000,000,000 industry charged with providing the utmost in economical motor vehicle transportation throughout the length and breadth of the country.

Indications are that gradually highway builders are becoming service-minded. A few years ago the major subjects discussed at the annual conventions were largely problems of engineering, design and construction. Not that road builders are satisfied with progress thus far made along those lines, but they have awakened to the imperative need for studying highway building in all its phases with particular emphasis on the appraisal of future requirements. It is therefore logical that the subject of highway finance was widely discussed at the convention just closed. For more than 18 months a committee headed by leaders in the industry has been at work studying all angles of the problem, and previous to the submission of its report covering 1929 activities more than 40,000 copies had been distributed.

In a few days the \$5,000,000 worth of exhibits that covered 200,000 square feet of floor space will have been dismantled and sent on their way to build new roads throughout the western hemisphere. The delegates who came from every state in the country and from 20 Central and South American and 14 nations of Europe to attend the convention will enter on their task of road-building with renewed vigor, after having exchanged ideas with fellow craftsmen and gained a new concept of the problems before them. From this exposition of progress in road-building activities is certain to develop a wealth of new ideas, a comprehensive view of new and improved labor saving equipment, and generally better practices and methods, much of which will be reflected in more effective efforts throughout the year in meeting the country's highway needs.

Growing Interest Manifested

THE CONVENTION sessions were better attended than in any previous year. Not only were interested listeners present to hear the papers, but participation in the discussions was animated. Success of the sessions was due in no small measure to a new method of procedure. Preparation of reports followed a year of work. First, a tentative report was prepared on the subject by one of the Association's staff of engineers, using the best available data. Second, this report was sent to a selected group of qualified reviewers. Report and reviews were then turned over to the respective committee chairmen and membership. In turn, the committeemen reviewed and rewrote the report for final presentation. By this procedure the country was scoured for authoritative information and the papers represented for the most part the product of many minds and not the opinion of a single author.

Airport Construction Activities

TWO SESSIONS were devoted to the subject of airports, and about a score of manufacturers of materials and equipment used in airport construction and maintenance participated in a small scale exposition of such facilities. The American Road Builders Association through its City Officials Division, it will be recalled, last fall held a Municipal Airport Conference, at which excellent papers were presented, constituting a notable addition to airport literature. Plans were discussed for a library and information service on this subject, because so large a part of airport construction and maintenance falls into the class of work the road builder performs. Major D. A. Davison, assistant engineer commissioner, District of Columbia, presented the report of the Municipal Airport Committee covering the recent conference. The report, compiled in pamphlet form, covers a wide range of subjects bearing on airport construction, including layout and planning; structures; drainage; surfaces; management; lighting; housing and public accommodation.

Condemn Plan of Financing State Roads With County Funds

DISAPPROVAL OF THE PLAN of financing state highways with county

funds was voiced at the closing session by Charles M. Upham, engineer-director of the Association and chairman of the general committee on highway finance. "The shifting of the tax burden from levies on real estate and other sources to the user of the highway is a constructive step in securing funds for highway activity," said Mr. Upham. "This change from the use of funds derived from general assessments to the use of funds secured from registration fees should continue to a point where general taxation for highway purposes is reduced to a minimum. With a steady increase in revenues derived from automobile taxes assured, and additional funds derived from increased federal appropriations probable, these sources should eventually account for the greater percentage of financing on state and county highways.

"The use of county funds for state highway construction is a practice in many states and accounts for a large percentage of the expenditure in those states. The financing of state highways with county funds, however, is not recommended and should diminish with the increase in revenue from other sources. Recent bond issues have been predicated on the gas tax. This has proven sound financing, and inasmuch as returns are steadily increasing and funds available may be readily estimated over a period of years, amortization charges, maturity, debts and annual expenditures can be forecast with a reasonable degree of accuracy."

Inter-American Highway Seen As Big Factor in Fostering Peace and Prosperity

DR. LEO S. ROWE, director of the Pan-American Union, Washington, as chairman of Pan-American day, said in the opening address:

"The American continent for the first time in history is developing an international system that expresses itself in terms of cooperation rather than in terms of conflict. Because of the operation of this system no country can grow at the expense of another. The prosperity of one is dependent on the prosperity of all. It is a new angle of approach in international affairs, and one fraught with great consequences. The idea of a Pan-American highway is a great and significant symbol. Because of this, America will not have lived in vain, if she gives to the world a picture of 21 nations united in conference, not jealous of each other but looking to giving their people a higher standard of life and greater prosperity. Elimination of poverty and misery will be the goal for all the Americas."

Holds Federal Aid Should Be Expended Solely for Primary Highway Systems

"FEDERAL AID should not extend to secondary or tributary roads," said William M. Connelly, of the Ottawa County Road Commission, Grand Haven, Mich., in presenting a report to the County Highway Officials Division. "Federal aid should be confined to primary roads. To carry federal aid much beyond the present seven per cent system would mean spreading it so thin that no prac-

tical benefits could result. County interests should favor larger federal appropriations for primary roads to relieve the pressure on state funds and in turn work for the legislation that would secure a larger share of the motor vehicle license and gas tax fund for the counties. In a measure this might be considered indirect federal aid."

Financing County Highways

THOMAS S. STEPHENSON, of the Pennsylvania Rural Roads Association, Altoona, presented a report on the subject of finance to the County Officials Division, in which it was pointed out that "equitable and adequate financing of county highways is probably one of the greatest problems before state and local administrators. A fair distribution of the cost of providing highway service in proportion to the benefits derived constitutes the general problem. Benefits accrue in four ways: National benefit by providing for free flow of traffic between states and by provision for national defense; general benefit to community life; special benefit to abutting property, and benefit to the individual user of the roads. The question is in what ratio should funds be allocated among the through traffic highways, the community roads, the purely local roads and the municipal streets."

Cuban Central Highway Embodies Many Interesting Features

M. A. CORROALLES, chief engineer, Department of Public Works, Havana, Cuba, graphically portrayed the big construction program in connection with the building of the nearly 1,000 miles of roads going to make up the Cuban Central Highway, running east and west through about the center of the island and connected to the principal cities and ports and points of historic interest by lateral highways. An idea of the immensity of the project may be gained by considering some points mentioned by Mr. Corroalles briefly summarized herewith:

All grade crossings are eliminated, and 90 such structures costing \$70,000 to \$250,000 each are included. In towns and cities necessary roadway sewers, drainage structures, curbs, gutters and sidewalks are being provided in connection with the roadway. A total of 2600 structures are necessary, and there will be 81 major bridges, each with 20 foot roadway and sidewalks on each side. The road is designed primarily for speed with safety. No grade is above five per cent, curves are carefully built and long visibility is assured. In one 25-mile section the excavation totaled over 5,000,000 cubic yards. More than \$1,000,000 is being expended for warning and guide signs and necessary signals. A number of nurseries have been established and 250,000 trees are to be planted along the highway. The Cuban contractors engaged in the construction of the highway have invested more than \$2,000,000 in plant equipment, and the American firm

on the job has expended \$8,500,000 for equipment. The project is scheduled for completion in 1931.

Association Officers Chosen

W. A. Van Duzer, Harrisburg, Pa., assistant chief engineer of the Pennsylvania Department of Highways, was elected president of the American Road Builders Association for the ensuing year. He and other officers to be installed in May include: Vice-Presidents—**J. R. Draney**, Natural Rock Asphalt Corp., Louisville, Ky.; **H. G. Shirley**, Richmond, Virginia State Highway Commissioner; **S. F. Beatty**, president of the Austin-Western Road Machinery Co., Chicago; **Samuel Hill**, honorary life president, Washington State Good Roads Association, Seattle; treasurer, **James H. MacDonald**, New Haven, Conn. Directors for three-year terms include: **C. M. Babcock**, Minnesota State Commissioner of Highways, St. Paul; **T. H. Cutler**, Jefferson City, chief engineer, Missouri State Highway Commission; **H. J. Kaiser**, Oakland, Cal.; **W. M. Kinney**, general manager, Portland Cement Company, Chicago; **William P. McDonald**, Flushing, N. Y.; **George F. Schlesinger**, general manager, National Paving Brick Manufacturers Association, Washington, D. C.; **United States Senator John G. Townsend** of Delaware.

City Officials Elect

New officers for the City Officials Division include: Colonel **C. E. Meyers**, Philadelphia; vice-presidents—**L. W. Herzog**, Commissioner of Public Works, Albany, N. Y.; **Bryson Vallas**, New Orleans, La., city engineer; **M. M. O'Shaughnessy**, San Francisco, city engineer. Directors for three-year terms: **Robert B. Brooks**, director of streets and sewers, St. Louis, Mo.; **M. B. Herlong**, chairman, Park Board, Jacksonville, Fla.; **D. L. Lewis**, city engineer, Fort Worth, Texas; **Charles M. Reppert**, chief engineer, Department of Public Works, Pittsburgh; **Ralph L. Rizer**, city engineer, Cumberland, Md.; **Robert H. Simpson**, chief engineer, Department of Public Service, Columbus, Ohio; **John C. Shaw**, city engineer, Los Angeles, Cal.

Name County Division Heads

New officers for the County Officials Division include: **Stanley Abel**, supervisor, Kern County, California, for president; vice-presidents—**L. O. Marden**, county engineer, Worcester County, Worcester, Mass.; **W. O. Washington**, county engineer, Cameron County, Brownsville, Texas; **George W. Jones**, county superintendent of highways, Los Angeles, Cal. Directors for three-year terms: **H. M. Clark**, county road engineer, Salisbury, Md.; **B. W. Davis**, county engineer, Nashville, Tenn.; **Arthur Hargreaves**, county highway superintendent, Armour, S. D.; **R. C. Hill**, county engineer, Georgetown, Del.; **T. L. Pendergrass**, county superintendent of roads, Durham, N. C.; **H. G. Sours**, county engineer, Akron, Ohio; **Charles D. Vall**, chairman, Board of County Commissioners, Denver, Col.

New President for Pan-American Division

M. A. Corroalles, Havana, Cuba, engineer in charge of the building of the \$76,000,000 Cuban Central Highway, was elected to succeed **Senor Octavio DuBois**, president, of the Mexican Highway Commission, as president of the Pan-American division.

Beyond the Hard Road Era

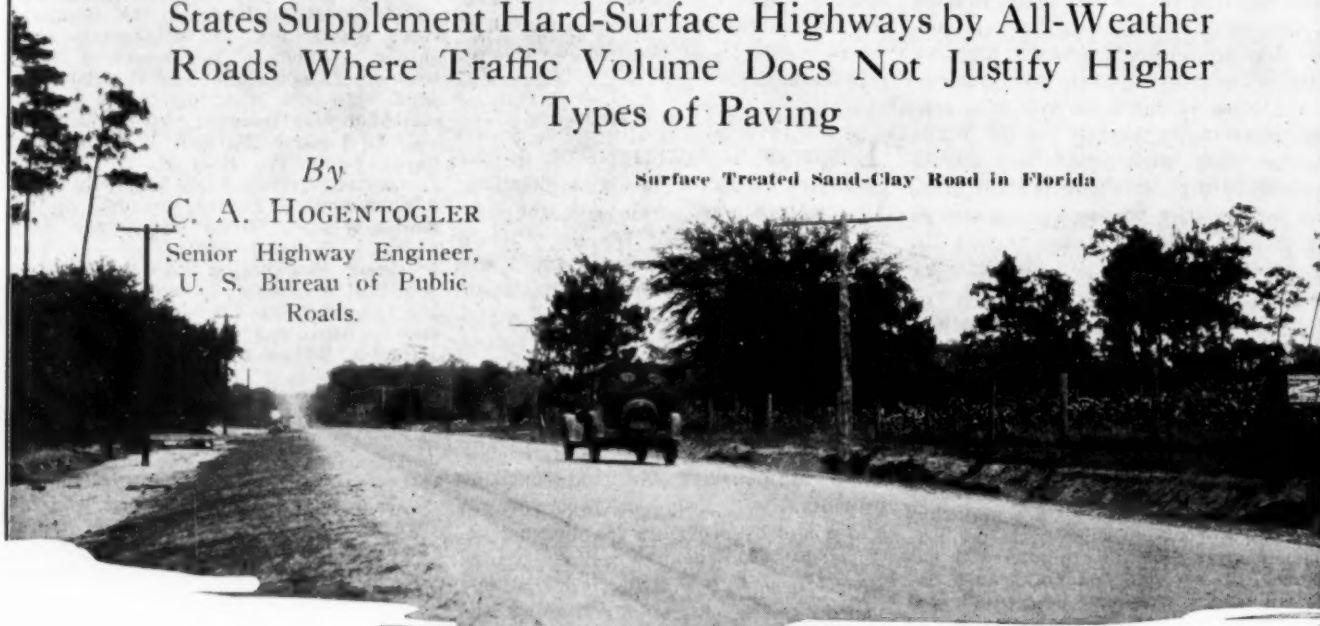
States Supplement Hard-Surface Highways by All-Weather Roads Where Traffic Volume Does Not Justify Higher Types of Paving

By

C. A. HOGENTOGLER

Senior Highway Engineer,
U. S. Bureau of Public
Roads.

Surface Treated Sand-Clay Road in Florida



ACCORDING to records of the United States Bureau of Public Roads, 3,016,000 miles were included in state and rural highway systems of the United States in 1928. Less than 4 per cent of this total mileage was paved with concrete, bituminous, and block types; 17.4 per cent was surfaced with low-cost types, such as waterbound macadam, gravel, sand-clay, top soil, limerock, caliche, etc., and 79.2 per cent consisted of earth road. Thus 2,390,000 miles of road remain yet to be surfaced.

At the annual meeting of the American Association of State Highway Officials held in San Antonio in November, Thomas H. MacDonald, Chief of the United States Bureau of Public Roads, disclosed that between 1921 and 1928, 109,550 miles of state highway were surfaced. During the same period, however, 103,000 miles were added to state highway systems, bringing the total to 306,000 miles. In 1928, therefore, there

still remained unsurfaced 113,000 miles or about as much as the 118,000 miles that were unsurfaced in 1921.

Thus, the unsurfaced road mileage included in the state highway systems is not decreasing at an appreciable rate. Consequently the importance of developing efficient types of low-cost road surfacing becomes apparent. The essential requirement of such roads is that they shall furnish all-weather service at minimum cost.

Termed Economic Necessities

The engineer has considered low cost road surfaces economic necessities notwithstanding their disadvantages. Harry J. Kirk, formerly Director of the Ohio State Highway Department, for instance, discusses the function of the low-cost road in the Seventh Annual Proceedings of the Highway Research Board, Part II, as follows:

"There may perhaps be those who call

themselves engineers who frown upon the low-cost road because it is dusty, because it causes greater tire wear than pavements, because the grades are steeper or narrower or the curves a bit sharp in places. Such theorists should be marooned on a mile of good pavement sandwiched between 10-mile stretches of ungraded mud road, left thus because all the funds available have been spent on the mile of ideal section, and compelled to fight their way out, day in and day out; jeered and cheered on their journey from mud hole to mud hole by the natives, mud-bound through the lack of common sense shown by these pseudo-economists."

Thus the low-cost road was formerly considered of value only as a temporary expedient to serve until such time as funds for construction of high-type pavements became available. It consisted of three general types: Constructed gravel or waterbound macadam; traffic-bound gravel or macadam and sand-clay or top soil road. Procedures for constructing these roads were considered more or less standardized and limits of serviceability possessed seemed to be well established.

Information furnished by various highway research organizations now discloses the existence of vast possibilities for improving serviceability of low-cost roads as such and for utilizing the low-cost road as the first step in construction of a high-type pavement. Furthermore, this information indicates that much remains to be learned about both design of low-cost roads and methods of constructing them.

According to theory suggested by Dr. Charles Terzaghi, not only definite proportions of both coarse and fine material



Preparing Subgrade For A Low Cost Surface Treated Road In Florida

are required to produce stability, but both the coarse and fine materials must possess particular physical characteristics. This is substantiated by Dr. C. N. Strahan's studies of roads in service. He emphasizes that while mixtures of sand about 60 to 85 per cent, silt 10 to 20 per cent and clay 5 to 10 per cent are apt to produce stable wearing courses, this grading is but a qualitative instead of a quantitative measure of efficiency, the quality of the fine material with respect to both cohesive and shrinkage properties which it possesses being of utmost importance. He furthermore reported that the method of construction is an influencing factor of considerable importance inasmuch as soil layers which while green are reduced by rains to a soft mud state and are thereby puddled show markedly greater strength than those which are packed with less moisture. He points out also that materials comprising sand-clay and top soil roads should be consolidated from the bottom upward and that flat rollers for this purpose are valueless. This suggests the need of a multiple rim type of roller or one based on the sheep's foot principle.

First Improve Sub-grade Soil

Instead of constructing a traffic-bound road by simply applying available granular material and maintaining it under traffic, attention is now being given to benefits which may be derived by first improving sub-grade soil which subsequently becomes the binder in the traffic-bound road, and second, selecting granular material with respect to its physical properties. Investigations of this character carried on by the Ohio State Highway Department indicate that

(a) Granular material where compacted by traffic furnishes in the resulting road surface a stability greatly exceeding that furnished by an equal thickness of mineral aggregate applied or compacted in any other way, and (b) the differences in the amounts of granular material required to produce stabilization may be very considerable in a period of years, due to difference in both the roughness and the angularity possessed by the individual granular fragments.

An excessive amount of material was required to maintain gravel roads laid on certain gumbo soils in Western Minnesota, where gravel is scarce. In an effort to prevent this excessive loss of

Prime Base Of Low Cost Surface Treated Road With Cover Material In Piles On Shoulders



material, the Minnesota State Highway Department in 1926 tried oiling the sub-grade before applying the gravel course. From these experiments the blotter type of construction, which consists only of a bituminous treated sub-grade covered with a very thin layer of granular material, was developed.

Proper Drainage Stabilizes Subgrade

This type of low-cost road surface on clay sub-grade furnishes all-weather service, due to the physical facts that capillary rise is not likely to prove detrimental in dense clay soils, and without important capillary rise, detrimental frost heave is not likely to occur. Without frost heave in appreciable amount, water is not available to soften the sub-grade soil during thaws. Consequently, when seepage is intercepted by proper drainage, dense clay sub-grades are not likely to soften unless water enters from the top. These impervious coatings serve at the same time to prevent sub-grade soil from losing stability due to softening.

Silt soils are likely to suffer detrimental capillary rise and also important frost heave. Consequently, water liberated during thaws must be removed from the sub-grade in order that blotter type surfacing may furnish all-weather service on silt sub-grade.

Center Drains Serve Important Role

Experience in both Minnesota and Wisconsin indicates that the loss of stability caused by thaws may be eliminated to a large extent by placing a drain under the center of the road, due to the fact that thaw is likely to occur under the center first; therefore water liberated in

this manner cannot penetrate the frozen soil along the edges of the roadway and reach drains located there. The center drain, according to indication, serves (a) to lower the moisture content of the soil before freezing, and (b) to provide for disposal of water liberated by thaws.

Macadams on other than elastic soils fail primarily because the sub-grade soil penetrates the interstices of the under stone courses. Therefore treating the sub-grade with bituminous materials and covering with a thin cushion course prior to constructing macadams may serve very appreciably to increase the serviceability of relatively thin macadams when constructed on properly drained sub-grades.

The development of proper surface treatment methods also has served to increase the efficiency of low-cost road types.

Base for High Type Pavements

Low-cost roads are of special interest, as they possess possibilities of serving as foundations for more resistant pavements. When low resistance to abrasive action of wheels instead of low resistance structurally is responsible for traffic limits usually designated, transformation of low cost, limited traffic road into one possessing increased traffic limits may be accomplished by merely covering the stabilized low-cost road with a wearing course which furnishes adequate resistance to these abrasive forces.

Important with respect to construction of low-cost roads is the fact that but slight differences existing either in some construction detail or the character of some material may cause the service value possessed by the resulting road

View of Base Of A Low Cost Surface Treated Road In Florida After First Shaping Operation



to be radically different. Among these differences are the following:

Service Values Vary Widely

1. Graded materials such as stone screenings with dust, sand-clay, etc., when used as cushion layers serve to prevent clay from penetrating the interstices of macadam, whereas an equal thickness of cohesionless sand may fail to serve this purpose satisfactorily.

2. Surface treated macadam wearing courses composed of stones graded in size from $1\frac{1}{2}$ inches to $\frac{1}{4}$ inch are apt to afford service in appreciably less amount than similar wearing courses of equal thickness which contain no stones smaller than $1\frac{1}{2}$ inches.

3. Macadam bases when permitted to carry traffic for an appreciable length of time before covering are apt to prove much more efficient than macadam bases when covered with wearing courses immediately after construction.

4. A surface treatment which includes a primer penetrating the road surface not more than about $\frac{1}{8}$ or $\frac{3}{16}$ of an inch may prove entirely satisfactory, whereas a surface treatment without the primer may not prove satisfactory.

5. Thoroughly wetting and puddling sand-clay and top soil layers furnishes stability appreciably greater than that furnished by the same materials when not so manipulated.

6. Oiling sub-grades before applying gravel may permit gravel surfaces 2 to 4 inches thick to render service equal to that furnished by gravel courses 8 inches thick when laid on similar sub-grades not oiled.

7. Treating dense clay soils with hydrated lime or merely wetting them before oiling may cause the oil to penetrate further into the soil and to produce a more efficient blotter-type surface than when the soil is not so treated.

8. Simply changing the location of a drain from side to center of the road

may prevent low-cost roads from breaking up in the spring, due to "frost boils."

9. Either adding small amounts of granulated slag to certain types of gravel or crushing the gravels may require an appreciably less amount of material to produce stability than is required when rounded gravel fragments are not so treated.

Problems Clearly Presented

Encouraging is the fact that the difference in the serviceability furnished by the road surface due to differences in either the construction methods or the materials as noted are entirely explainable by existing theories of stability. Thus the desirability of investigating the low-cost road from new angles suggested by principles controlling stability as now understood becomes apparent.

Experiments of this character should include the use of admixtures both physical and chemical combined with methods of soil manipulation all designed (a) to eliminate detrimental elasticity, (b) to prevent cohesive soils from softening due to water absorption, (c) to furnish both cohesion and internal friction in amounts required to produce both stable sub-grades and road surfaces and, (d) to provide the road surface with resistance adequate to withstand the abrasive forces produced by traffic.

Depending on results furnished by investigations of this character the importance of the low cost road to the surfacing of our vast highway system may become very much increased.

Diversity of Research Activities

Among important investigations which

furnish information with respect to future research are the following:

1. Top soil and sand-clay roads in Georgia—Georgia State Highway Department, under direction of C. N. Strahan, and the United States Bureau of Public Roads cooperating.

2. Low cost improved roads—Highway Research Board, under direction of C. M. Conner.

3. Physical laws controlling frost heave—United States Bureau of Public Roads, with the University of South Carolina, Massachusetts Institute of Technology and State Highway Departments of New Hampshire and Minnesota.

4. Benefits furnished by treating sub-grades with bituminous materials before constructing gravel roads—Missouri State Highway Department.

5. Gravel blotter course type of surfacing—State Highway Departments of both Minnesota and North Dakota.

6. Benefits to be furnished by use of bituminous materials in low-cost road construction—United States Bureau of Public Roads with the Asphalt Association and the several State highway departments.

7. Investigation of traffic bound road surfaces in Ohio—Ohio State Highway Department and the University of Ohio with the United States Bureau of Public Roads cooperating.

8. Investigation of (a) physical laws controlling the stability of soils, (b) influence exerted by soil materials upon the mechanical properties required to furnish stability, (c) efficiency of tests to disclose the degree to which soil materials possess desirable mechanical properties, (d) physical laws controlling performance of sub-grade soils and (e) influence exerted by sub-grade performance upon service rendered by road surfaces—United States Bureau of Public Roads and cooperating agencies.

\$1,250,000 for Highway Bridges and Causeway at Wilmington



Two bridges and a connecting causeway as above illustrated were recently completed over the Cape Fear River at Wilmington by the North Carolina State Highway Department, involving an expenditure of \$1,250,000. A description of the project was published in the MANUFACTURERS RECORD of November 7, 1929.

The Mediterranean Fruit Fly

Florida Practically Free of the Pest Which This Grower Believes Was Blessing in Disguise—Northern Capitalists Have Options on Bearing Groves Amounting to \$10,000,000

By WILLIAM J. HOWEY, Howey-in-the-Hills, Fla.

[William J. Howey, head of a grapefruit and orange development in central Florida, which has 12,000 acres of citrus fruit trees planted and which adds yearly approximately 2000 acres of newly planted trees, here gives his conclusions regarding the Mediterranean fly. Mr. Howey in the 1928 campaign was the Republican candidate for governor of Florida.—Editor MANUFACTURERS RECORD.]

The Mediterranean fruit fly which entered America's backdoor through Florida in March of last year immediately became a vehicle for the alarmists to get aboard and release adverse propaganda. It was stated then that the citrus industry had but a fifty-fifty chance to survive. The people would become paupers. Business men would fail and have to go into bankruptcy.

It is true that the Mediterranean fly was hurtful and destructive to the citrus grown in Hawaii, but there it is but a front yard and back yard proposition. It is not a monied crop. A dry, warm climate is ideal and most favorable for fly propagation. It is not in any sense comparable to the Florida situation because in Florida the rainfall in itself is quite sufficient to act as a deterrent to fly propagation. The vast spotting where infestation occurred blanketed the entire state and was classified by the state plant board as "singles." That is to say, one fly or one worm was all that was found, yet that was sufficient to turn a territory of one mile in area into an "infested zone," and re-infestation or second appearance of the fly occurred in ridiculously few places.

When we consider that Spain has had this Mediterranean fly most of a century

and that Spain produces approximately 30,000,000 boxes of oranges against Florida's 9,000,000 to 13,000,000 boxes, it certainly appears that the problem is serious only if neglected and that it is possible of solution. During the past four months 6000 men employed by the plant board, with the use of 7000 traps baited to coax the Mediterranean fly, have been able to discover but one fly in Florida.

A report from the plant board is the writer's authority for the statement. Since a solution of the fly problem is known, and this solution lies in more than one agency, the fly will go the way of the cottony-cushion scale and the white fly and other pests which have heretofore appeared and been put under control.

Contrary to the statement given by Northern bankers that the Florida citrus industry was ruined, it is not even hurt. Contrary to the statement that shipment of citrus fruit in Florida would lag behind other years to the total crop produced, the result is to the contrary. We will ship a larger percentage to the total production this year and at higher prices than for many years. The fly has been a blessing in disguise.

Science has given to Florida the best of its equipment, seeking avenues of con-

trol and safety, and we have learned to prevent the spread of any fly larvae and incidentally arrest the spores of blue-mold and other pests which cause decay in fruit; Florida fruit is processed and has gone on the market without any decay as against 10 to 25 per cent heretofore. This knowledge itself is worth untold millions to the industry of Florida.

The second clean-up campaign inaugurated by the plant board has resulted in production of better quality of fruit. Hence better prices obtained in the market.

The fly is so inconsequential that capitalists in the North are now taking options on old bearing groves and the latest report is that they have options amounting to \$10,000,000. Certainly this large aggregation of capital would not go into the citrus business if it was in any sense menaced by an enemy uncontrolled. Therefore, the citrus producing section will not be pauperized, because the trees are here. Not one has been lost nor will be lost as a result of the fly. Growers will not go into bankruptcy, because the fruit is of better quality and prices obtaining are higher, and the state will be more prosperous as a result. The value of groves will increase.

\$2,500,000 EXPENDITURE PROJECTED

South Carolina Power Company Plans Important Improvements

Charleston, S. C.—L. A. Magraw, vice-president and general manager of the South Carolina Power Company, estimates that expenditures for 1930 will amount to \$2,500,000. Work to be undertaken by the company will include the rebuilding of street railway property in this city, the reconstruction of a power distribution station at Summerville, the rehabilitation of distributing systems at Aiken and Edgefield, extension of a transmission line from Charleston to Meggett, construction of a local plant and distributing system at North Augusta, reconstruction of a substation at

Beaufort and the rebuilding of a line from Cope to Bamberg. The company is a subsidiary of the Southeastern Power and Light Company, New York, and serves about 10,000 square miles of territory in 13 South Carolina counties.

Dwellings for Mill Operatives

Trenton, Tenn.—Plans are being arranged by H. H. Elder, president of the Chamber of Commerce; H. T. Bennett, secretary; G. W. Everett and T. K. Hapfel, all of Trenton, to organize a company to erect additional dwellings for operatives of the Trenton Mills, Inc., construction to be handled by a local contractor. The Trenton Mills, Inc., of which W. H. Harder, Kinderhook, N. Y., is president, plans to rebuild their spinning and knitting mill recently burned.

To Investigate Waste in Mineral Industry

A study designed to check the present waste of mineral resources due to overproduction in the industry has been initiated by the American Mining Congress. The investigation will be conducted by the following committee representing the various branches of the mining industry:

Clinton H. Crane, St. Joseph Lead Co., New York; Ralph M. Roosevelt, American Zinc Institute, New York; C. E. Bockus, National Coal Association, New York; F. H. Brownell, American Smelting and Refining Co., New York; S. L. Mather, Cleveland-Cliffs Iron Co., Cleveland; S. D. Warriner, Lehigh Coal & Navigation Co., Philadelphia, and E. B. Reeser of the American Petroleum Institute, Tulsa.

Also, the committee will survey the situation in relation to waste of capital and labor involved in overproduction.

Some Major Projects of the Week

Under the Construction Department elsewhere in this issue will be found a complete list of the week's activity in the South and Southwest, including hundreds of industrial, mining, power, transportation, building, construction, and financial projects. It presents a panorama of development requiring materials, equipment and machinery of almost every description.

40,000-KILOWATT POWER UNIT

Texas Power and Light Company to Double Trinidad Plant Capacity

Dallas, Tex.—Construction will soon be started on an addition to the Trinidad generating station of the Texas Power and Light Company, which will increase the capacity of the plant from 40,000 kilowatts to 80,000 kilowatts, according to J. W. Carpenter, president and general manager. The work will involve the installation of a 40,000-kilowatt turbo-generator and additional equipment for fuel preparation. The new unit, like the present plant, will burn powdered Texas lignite. The Texas Construction Company, Dallas, will handle construction which is expected to be completed within 14 months. The addition will be so designed and erected that future power needs may be met by the construction of similar units according to an original plan that provided for an ultimate installation of 160,000 kilowatts. In addition to the plant expansion, the program calls for the construction of a 132,000-volt transmission line from Trinidad to connect with the southern part of the company's system at the large switching station at Hillsboro.

7-Mile Rail Extension

Welch, W. Va.—The Interstate Commerce Commission has authorized the Norfolk & Western Railway Company, W. P. Wiltsee, chief engineer of bridges and roadway, Roanoke, Va., to build a 7-mile extension in McDowell County, West Virginia and Tazewell County, Virginia.

\$700,000 College Building Program

A building program for the Mississippi Agricultural and Mechanical College, for which an appropriation will be requested of the Legislature now in session, calls for an expenditure of approximately \$700,000. The program contemplates the erection of the following buildings: Gymnasium and field house, \$200,000; dairy building and equipment, \$150,000; engineering building and equipment, \$150,000; new residences, \$75,000; general repairs on college buildings and dormitory, \$110,000, and a dairy barn for the

working boys' department, \$15,000. Construction details will be handled by the State Building Commission, Jackson. A building program now nearing completion covered the construction of a building for agriculture, experiment station, dormitory, dining room and kitchen for working boys, all at a cost of \$540,000.

Big Addition to Sulphur Plant

Newgulf, Tex.—An addition under construction here at the plant of the Texas Gulf Sulphur Company, Inc., New York, consists of the installation of five additional 1500-horsepower boilers, a 330-foot radial brick stack 18 feet in diameter, two additional 70,000-gallon per hour low pressure water treating tanks with filters and chemical feeding equipment, two additional high pressure mine water heating equipment, necessary pumps and an addition of three bays to the chemical treating building. All work except the erection of the stack is being done by the J. G. White Engineering Corporation, New York, the stack being erected by the Alphons Custodis Chimney Construction Company, also of New York. Materials

for the plant were purchased as follows:

Boilers (Stirling type)—Babcock & Wilcox Company, New York
Forced draft fans—Green Fuel Economizer Company, New York
Water treating plant and mine water heaters—Cochrane Sales Company, Inc., New York
Soot blowers—Diamond Power Specialty Corporation, New York
Pumps—A. S. Cameron Steam Pump Works, New York
Boiler meters—Bailey Meter Company, New York
Fuel burners—Forney Combustion Engineering Company, Dallas, Tex.
Boiler settings—Bigelow-Liptak Corporation, New York
Boiler breeching and air ducts—Connery & Company, New York
Pump and fan drive turbines—General Electric Company, Schenectady, N. Y.
Boiler structural steel and steel for chemical building—Ingalls Iron Works Company, Birmingham, Ala.
Boiler casings, platforms and gratings—Houston Structural Steel Company, Houston, Tex.

Plan 113-Mile Rail Line

Fredericksburg, Tex.—The Interstate Commerce Commission has approved construction of a 113-mile rail line and auxiliary improvements by the Gulf & West Texas Railway Company, from Fredericksburg through Mason to Brady, and from Eden to San Angelo, estimated to involve the expenditure of \$6,827,665.

\$42,500,000 Railroad Expenditure

Chesapeake and Ohio Lines Plan Important Additions and Betterments in 1930

Richmond, Va.—A budget adopted by the directors of the Chesapeake and Ohio Railway Company, upon the recommendation of J. J. Bernet, president, contemplates the expenditure of \$42,500,000 by the Chesapeake and Ohio Lines during 1930, for additions and betterments. This budget is exclusive of a \$42,500,000 budget previously announced for equipment. For the Chesapeake and Ohio proper, the budget provides \$27,500,000, including \$5,000,000 carried over from 1929, and for the Hocking Valley, \$7,000,000, including \$4,000,000 on carry overs. The Pere Marquette budget calls for the expenditure of \$8,000,000, including \$2,000,000 carry overs.

Contemplated projects are designed to increase the capacity and reduce operating expenses of the lines. Some of the work will not be completed this year and will require further expenditures in 1931. A program for the Chesapeake and Ohio

proper calls for construction on all parts of the system, including the enlargement of tunnels, new tracks, extension of passing tracks, enlargement of shops and reconstruction and strengthening of bridges. Two major projects are scheduled for Newport News, Va., on Hampton Roads, where a new coal pier to cost more than \$1,600,000 and a \$1,500,000 merchandise pier will be built. A \$160,000 passenger station and car parking tracks will be provided at White Sulphur Springs, W. Va., and a \$140,000 office building erected at Russell, Ky. The company will build a \$750,000 freight house at Cincinnati. More than \$3,700,000 will be expended to increase main line clearances by enlarging several tunnels.

General improvement of facilities is planned for the Hocking Valley on all parts of its lines, one of the largest single projects being a \$475,000 freight terminal to be built at Columbus, Ohio.

LETTERS FROM OUR READERS

Looks Forward to Good Business

A. M. Lockett & Company.
Contracting Mechanical Engineers.
Complete Steam Power and Pumping Plants.
Branch Offices
Houston
Dallas
San Antonio.

New Orleans, La.

Editor Manufacturers Record:

The past year has been the most profitable my company has ever experienced, due to a number of very substantial contracts which happened to come up during 1929, including gas compressor stations for the Memphis Natural Gas Line, and also for the Birmingham and Atlanta lines.

We had, in addition, a very substantial business with the oil refineries and oil pipe lines.

While I am not able to give you any definite information as to the projects which are in sight or which will probably materialize in 1930, I can say in a general way that we are looking forward to a good business year, and can see nothing in the outlook that could discourage anyone in this section of the country.

A. M. LOCKETT.

REPRESENT:

Huber Manufacturing Co., Marion, Ohio.
Babcock & Wilcox Co., New York.
Universal Road Machine Co., Kingston, N. Y.
Worthington Pump & Machinery Corp., New York.
Terry Steam Turbine Co., Hartford, Conn.
Spray Engineering Co., Boston, Mass.
C. E. Squires Co., Cleveland, Ohio.
Ehret Magnesia Mfg. Co., Valley Forge, Pa.
Baltimore Tube Co., Baltimore, Md.
Williamsport Wire Rope Co., Chicago.
Harnischfeger Corp., Royal Oaks, Mich.
Hotchkiss Steel Products Co., Binghamton, New York.
Greene-Tweede Co., New York.
Griscom-Russell Co., New York.
Cleveland Worm & Gear Co., Cleveland, Ohio.
Nash Engineering Co., S. Norwalk, Conn.
Robins Conveying Belt Co., New York.
American Blower Co., Atlanta, Ga.
Carbondale Machine Co., Carbondale, Pa.
Ohlen Bishop Co., Atlanta, Ga.
Lagonda Mfg. Co., Springfield, Ohio.
T. L. Smith Co., Milwaukee, Wis.
Hug Company, Highland, Ill.
Morse Chain Co., Ithaca, New York.

Would Like to See Real Southern Democrat Nominated for Next Presidential Race

Arthur A. Oliver,
Manufacturers' Agent
To Furniture Manufacturers and
Body Builders.
High Point, N. C.

Editor Manufacturers Record:

I feel that for many reasons the year 1930, with the projects on foot that have already been listed, will prove to be a much better year than 1929, and perhaps the very best year in our history, for I have never seen before such gigantic projects as will be started in 1930.

Now what I would like to see is a good leader from the South nominated for the presidential race in the next election, a real honest to goodness Democrat willing to continue running our government in a regular orderly way and not having any radical ideas he would like to put into effect and thus kill our next chance at taking a fair turn at

running the government. We have two great parties, and the only way this country can continue a sound government is to have those two parties so strong that each one will have, at reasonable intervals, access to the managerial function of our government; it is not good for the Republican party or the Democratic party to hold government power too long; that is just what caused so much stealing and trickery to crop out in the last 8 to 10 years in the Department of Interior and many other departments. We've been needing a house cleaning, and a political party never gets divided against itself sufficiently to clean house; so it takes the opposing party to do it for the party going out.

This good prosperity we are talking about will get in full swing about April and continue through the balance of 1930. In the meantime let us all do our bit at hoping and working to bring it about.

ARTHUR A. OLIVER.

REPRESENT:

Turner & Seymour Mfg. Co., Torrington, Conn.
Ashtabula Hide & Leather Co., Ashtabula, O.
Textile Leather Co., New York City.
A. R. Haensler Co., New York City.
Kessel & Haber, New York City.
Woodward & Cochet Mfg. Co., Chicago, Ill.
D'Arcy Spring Co., Kalamazoo, Mich.
Royersford Spring Bed Co., Royersford, Pa.
Union Fibre Co., Winona, Minn.

Looks for Development of More Extensive Projects in South

The Peelle Company, Inc.,
Manufacturers of
Fire Doors for Freight, Elevator and Dumb-waiter, Shafts and Safety Appliances.
Brooklyn, New York
Atlanta, Ga.

Editor Manufacturers Record:

Judging from the views of general contractors, architects, etc., the coming year should be very good in the building industry in the South.

We naturally do not expect a great amount of building until after February has passed. As you know, the South has been going forward at a remarkable pace within the last few years and we believe more extensive projects will develop in the future.

C. W. AMICK.

A Tax Reduction Suggestion

Merchants Banking Trust Company.
Mahanoy City, Pa.

Editor Manufacturers Record:

I suggest an amendment to the tax reduction bill, the exemption based on 6 per cent of \$250,000 capital and surplus. Increase the exemption to \$15,000 on all corporations and it will work to the advantage of smaller corporations in banking, mining, manufacturing, lumbering, transportation and will serve a better purpose than a horizontal one per cent reduction on tax rates.

It will tend to keep in business the small concern, a much-desired destiny. In this era of bank monopoly, mergers, chains, consolidation and big business. The exemption will tend to encourage the smaller concern to the disadvantage of chain business.

DANIEL F. GUINAN, President.

The Navy's Human Problem

Richmond, Virginia.

Editor Manufacturers Record:

Every American citizen who is proud of our navy and wishes it to attain the maximum of efficiency should be interested in the revelations I am about to make. I have spent upwards of 12 years in the study of navy health, and my findings not only concern human kind, but economy, morale and the nation's security. Destructive criticisms or a desire to alarm the people are outside my undertaking. Everything in our navy has been investigated and published, and millions have been appropriated for improvement, except for the health of those who defend the American flag. Obviously, this is an unbalanced program.

Our defenders are accepted "physically fit"; perhaps only about 30 per cent of those who apply; the flower of American manhood. But are they ready for the most part, for an emergency? Here are the statistics for the past ten years:

Year	Navy Personnel	No. of Patients on Sick List	Deaths	Invalided Out of Service	Days Lost Due to Sickness
1920	298,774	201,979	1,762	15,517	4,423,204
1921	140,773	109,717	1,000	5,259	2,113,991
1922	148,861	93,136	712	4,854	1,875,948
1923	122,126	74,455	395	2,788	1,395,543
1924	116,565	72,092	472	2,330	1,476,152
1925	119,280	66,454	498	2,402	1,319,387
1926	115,391	61,372	415	1,635	1,219,031
1927	113,756	60,628	345	2,239	1,271,416
1928	115,316	68,674	484	2,484	1,350,358
1929	116,047	68,271	485	2,171	1,364,756

While I have determined the reasons and remedies for this apparent defenselessness, space precludes such a relation, but here is the case in a nutshell: The trouble does not rest with the individual officer but the system. Even if the annual health report reached the taxpayer's hands, he would be unable to appreciate the lengthy statistical tables. Differing from the state and city health officer, navy health is not discussed publicly. The medical corps changes too frequently; from 1926-29 inclusive, 153 navy doctors resigned, such education at the U. S. N. Medical School is very expensive; navy doctors are inadequately paid. There is a material shortage of dental surgeons and nurses, evidenced for several years in our reports. Doctors are required to execute many matters, for the lack of clerks and stenographers. The 1929 report says "only about 40 per cent of recruits are transferred to sea in a state of dental health." There are no free dispensaries on the ocean. Lengthy, pertinent criticisms are entered by our able navy surgeons, but they never reach the people. There should be an untrammeled commission to discuss these important matters not only with Congress, but with the people. My work being precisely in accord with economy and health espoused by President Hoover, the people should write to the President and to Congressmen regarding the nation's defenders.

(Dr.) W. ARMISTEAD GILLS,
U. S. Navy (Retired).

IRON, STEEL AND METAL MARKET

Steel Production at 65 Per Cent Capacity Considered Not Bad at Present

Pittsburgh, January 27—[Special.]—Business in the steel trade is rather spotty, some finished lines doing better than others, while different classes of consumers show quite a range in the amount of their activity.

In a general way it may be said that steel activity has been increasing but that it has not increased as much as expected, or as much as it usually does in January, as a regular seasonal swing.

Steel ingot production is said to have increased in some districts, but it is still estimated at about 65 per cent of rated capacity, which merely puts it back to the rate at the beginning of December, when there had been a large decrease. In essence, the recovery thus far is only from the particular dullness of late December, and as that dullness was produced chiefly by a special cause, preparation of buyers for inventory, such a recovery is of no great significance. What the steel trade needs is evidence that it is engaged in a progressive increase, which would be considered satisfactory even if the pace were a slow one.

In view of all the circumstances a 65 per cent rate is not at all bad for the present time. The preponderant opinion is that this will be a good average year, which would put it distinctly below last year, which was exceptional, and that tonnage will increase for several months. An 85 per cent rate next May or June would be in keeping with these views, and 65 per cent now would not be bad, as increases of only a few per cent a month would bring out 85 per cent in May or June.

Structural fabricating shops were well booked at the beginning of the year, for they had a fair order book three years ago and official reports show that in each of the three intervening years they booked more than they shipped, last year's excess being 261,600 tons. The three-year excess is equal to about two months of work at a full rate. On the other hand lettings this month have been quite light, averaging less than one-half of last year's rate.

In the last fortnight 1500 tank cars have been ordered by private companies while the railroads themselves are not reported as having bought any cars. The freight car shops have a moderate amount of business on books, but it is well spread out as to deliveries and not a great deal of steel is being consumed by them week by week.

The automobile industry has been pick-

ing up, but only slowly, and from a very low rate. Evidently even February will be a very light month in automobile production. Predictions that this year will duplicate 1928 production, representing 18 per cent decrease from 1929, can only be borne out by a complete departure from the usual seasonal swing, for on an average April has been the peak month and there are no signs that the coming April will be at all good.

Agricultural implement factories are running very well, as formerly, with no signs that there will be any letting down in future. Steel shipments to them are substantially equal to the average rate of the last two years.

In a very rough way it may be said that new construction in 1930 as figured up at Washington involves about ten billion dollars, one-third government, one-third utility and one-third private. No attempt has been made to guess even roughly how much steel tonnage this work will require, and it makes a big difference as to steel how a million or a billion dollars is spent.

The steel bar market has yielded at least a dollar a ton, being now quoted at 1.85c to 1.90c. This follows various other declines and all important finished steel products are now off more or less, excepting pipe and standard rails. The lines that have declined are showing no particular steadiness at their new levels. Some observers do not regard the declines as an unfavorable suggestion for the future, holding that in the circumstances there ought to be some decline, and that approximately present prices may hold. Others feel that when a well established market once started to slip it will be difficult to hold it.

Orders for Pig Iron Call for Prompt Delivery

Birmingham, Ala., January 27—[Special.]—The second month of the year will see order books with the blast furnace interests of the state fairly well covered on probable make of pig iron for the first quarter. Sales continue in small lots but the aggregate has been steadily increasing and there is no additional tonnage going to the surplus stock. In most instances instructions accompany orders for delivery within a short time, orders being mainly against early requirements. Reports received by the iron manufacturers are to the effect that improvement in general business is in sight and there will be need for further production. Cast iron pressure pipe making is beginning to show greater production and shipments will shortly be active, this

industry appearing confident that spring business this year will be very good. No change in quotations has been made in this section, though higher prices are indicated in the East. Less-than-car-lots pipe is quoted at \$38 and car lots at \$37, for six-inch and over sizes. Several lettings were reported again recently with bids on quite a tonnage. Pipe shops in this district, in splendid shape, have larger capacity than ever before and especially for centrifugal or machine-made pipe.

While some attention has been given to blast furnaces in Alabama there is no schedule under consideration looking to increased production for the time being.

Surplus stock of pig iron will hardly be removed for several months yet, though shipment into the Middle West and to the East will shortly be under way again. There is also reiteration that some furnace interests are selling as much iron as they are making and that shipments are beginning to assume proportions.

Estimate is still made that production for January will be about what it was in December and the coming month will see improvement.

Steel production is also to see a little speeding up as increased shipments of products are being taken up. Railroad orders are mentioned mostly in steel circles and quite a tonnage is going to products for these consumers. The Gulf States Steel Company is pushing its development program which includes new blooming and plate mills and in the next few days will have all plans completed for the sheet mill. As the machinery is being installed on the first two mills, there will be little interruption of other departments. Guarding against any loss of time in the production of billets, considerable stock has been piled up and some billet purchased from others.

Tennessee Coal, Iron & Railroad Company and American Steel & Wire Company, subsidiaries of the United States Steel Corporation, have their mills going fairly well though there is much room for improvement. The Tennessee Company is to add to its sheet mill at Fairfield during the year. Steel fabricating shops in this district are receiving much business from throughout the territory and see steady operation for several weeks ahead at least. Prospects are bright in this line.

Coal mining continues quiet on the whole, with a few operations reporting activity. Output is normal for the past year or two but under conditions existing two years and more ago. Coke production is active.

Scrap iron and steel is unchanged.

Steels are having a little demand with heavy melting steel predominating. All quotations are weak, the list given out being tentative.

Reports are again current that the Republic Iron & Steel Company, with the idea of expanding in the South, seeks acquisition of another company in order to build up raw material and other supplies. Republic now has two blast furnaces in operation in Birmingham, with by-product coke works, coal and ore mines.

Quotations for pig iron and iron and steel scrap are as follows:

PIG IRON

No. 2 foundry, 1.75 to 2.25 per cent silicon, f. o. b. furnaces, \$15; No. 1 foundry, 2.25 to 2.75 per cent silicon, \$15.50; iron of 2.75 to 3.25 per cent silicon, \$16.00; iron of 3.25 to 3.75 per cent silicon, \$16.50.

OLD MATERIAL

Old steel axles	\$17.00 to \$18.00
Old iron axles	17.00 to 18.00
Old steel rails	13.00 to 14.00
Heavy melting steel	10.50 to 13.50
No. 1 cast	12.00 to 13.00
Stove plate	11.00 to 12.00
No. 1 R. R. wrought	10.00 to 11.00
Old car wheels	11.00 to 12.00
Old tramcar wheels	12.00 to 13.00
Machine shop turnings	6.00 to 7.00
Cast-iron borings	6.00 to 7.00
Cast-iron borings, (Chem)....	13.00 to 13.50

Metal Prices Fluctuate, With Tin at Low Level

New York, January 27—[Special.]—Some interesting happenings have taken place among the non-ferrous metals, though these were not always on the constructive side. Thus tin prices sagged to the lowest levels since July, 1923, when a price of 37½¢ was touched by Straits tin. Zinc sank to 5¢ per pound and then recovered at least \$4 per ton, the first upward movement in several months. Export sales of copper were increasing but domestic business continued to lag. Lead was in a little less demand than for the preceding week but prices were holding steady and in fact the price had a very firm aspect.

Zinc was doubtless the most active metal as regards sales, business having been the best in several months. Consumers of zinc have realized that prices were below the cost of production and were therefore quick to buy as far ahead as the end of the second quarter. Tin was in moderate demand also because of low price levels and bargain prices. Lead was more quiet, not only because of less buying desire on the part of consumers but also because producers are more reluctant to sell, having production well booked ahead.

More encouraging reports from the steel industry help the tone of the non-ferrous metals. The general rate of steel production is now 69 per cent of capacity, as against 38 per cent the last two weeks of December and comparing with 83½ per cent a year ago at this time. The Bethlehem Steel Corporation

at 74 per cent is in the lead among the companies which make a diversified line of steel commodities.

The automobile industry continues to expand operations gradually and is doing as well as could be expected in view of the large surplus of cars which was accumulated last year. Better operations in the steel industry give hope of greater consumption of zinc and tin for coating purposes.

Among the minor and precious metals is outstanding the further decline in platinum prices by \$1 to \$3 per ounce, the major decline taking place in that metal which is most heavily alloyed with iridium. Platinum prices are now the lowest in years. Silver has no trend and pivots around the price of 45¢ per ounce. Contrary to the general belief, the consumption of silver in the arts last year increased rather than declined and despite the growing use of pewter and platinum. Quicksilver prices are somewhat weak at \$123 per flask. Antimony prices have advanced to 8¼¢ per pound, the highest in several months.

There continues the same uncertainty in the copper market as to whether prices are going to hold at 18¢ per pound. The uncertainty is what is keeping domestic users out of the market. Some expect a decline at any time; others believe there will be a cut in April; still others say July, while others believe that present quotations will hold all year.

From the brass manufacturing centers of the country come reports that business is improving slowly. In fact, it is believed that orders for finished goods are improving more rapidly than refined copper is being bought with which to manufacture these goods. The brass trade is mildly optimistic over 1930 business. Good orders are expected from the electrical industry, the shipbuilders, the public utilities and the automobile industry.

The best purchasing of copper from American consumers is on the part of the cable manufacturers, the New York Edison Co. having been among the buyers. Consumers take only January and February deliveries, though normally at this time of year consumers buy as far ahead as May. Export sales by the middle of the week were of fair proportions, Germany as usual being the liveliest purchaser. One observer points out the fact that surplus stocks of refined copper must not be regarded as excessive.

The sharp declines in tin prices were attributed to disappointment that curtailment of tin production as sponsored by the Tin Producers Association has not been more widespread. Low prices accelerated business, particularly on the National Metal Exchange where the turnover in standard tin futures on Wednesday was 200 tons, or twice normal.

At the close of the preceding week zinc

was selling at 5¢ per pound, the lowest price since 1922. Large quantities were bought for as far ahead as April and prices began to react upward at the rate of \$1 per ton per day. Much of the zinc demand has been for far forward months whereas producers are more anxious to sell prompt metal. Ore prices are unchanged at \$35 per ton, so the slab zinc trade has been losing money in the sales of the past several days.

Lead prices are unchanged at 6.10¢ per pound, East St. Louis, and 6.25¢, New York. The lead trade is inclined to the belief that prices will advance next month.

NEW TYPE STREET RAILWAY

New Orleans Engineers Develop Method of Construction to Eliminate Noise

New Orleans, La.—A new type of street railway track designed to meet transportation needs in modern cities has been developed by engineers of the New Orleans Public Service, Inc., and four miles of track are being laid in Canal street, between the river and Claiborne avenue. Two outstanding advantages claimed for the track include the elimination of noise and the material lessening of the chances that street paving in proximity to the tracks will be broken because of vibration. In lieu of wooden crossties, the rails are held in place by a rail anchorage imbedded in concrete by means of steel reinforcing, on top of which the rails are fastened. This feature is said to solve the problem of deteriorated paving by taking up the vibration of the rail before it is transmitted to the surrounding concrete. Noise is eliminated, it is claimed, by the use of a specially devised coating of asbestos, asphalt and cheese cloth surrounding the rail itself, which acts as a cushion between the rail and the concrete and deadens the sound of the car wheels. The device was invented by I. O. Mail, assistant superintendent of roadways of the company, and the final track layout was subjected to a five months' test in the testing machine at Tulane University.

\$750,000 Building Contract

Fort Worth, Tex.—The Aviation Building Corporation, H. Grady Barrett, president, awarded general contract to James T. Taylor, local builder, to erect a \$750,000 office building at Seventh and Main streets in this city. The structure will be 50 by 100 feet, 16 stories. Contract for the steel has been awarded to the Mosher Steel & Machinery Co., Dallas. Wyatt C. Hedrick, Inc., Fort Worth, is the architect.

AVIATION, AIRPORTS AND AIRWAYS

Asheville-Hendersonville Airport

Asheville, N. C.—John D. Topping, publicity director of the local Chamber of Commerce, states that the construction of the first units of the Asheville-Hendersonville airport have practically been completed, but that the dedication has been deferred until spring. The airport, located at an altitude of 2300 feet, consists of a hangar of hollow tile construction, earth floor, composition roof and steel roof truss; an improved north and south runway, 3100 feet long and 500 feet wide, and an east and west runway 2500 feet long and 500 feet wide; sod landing surfaces; circle marker 100 feet in diameter to mark the center of improved runway, and a small administration office in the hangar. The field totals 122 acres and is practically free from obstructions in every direction of approach. Drainage of the long runway was accomplished by the use of 12-inch Toncan pipe lines laid 100 feet apart and discharging in open ditches. Boundary lights are included in the plan of development. The airport will be operated by the Pocahontas Air Transport Company of Asheville and Bluefield, W. Va., W. E. E. Koepler, secretary, and will accommodate a training school.

Aviation Company Changes Name

The name of Pitcairn Aviation, Inc., has been changed to that of the Eastern Air Transport, Inc., with offices in Brooklyn and New York. This company, which operates air mail routes between New York, Atlanta and Miami, is not connected with the companies controlled by Harold F. Pitcairn, which include Pitcairn Aircraft, Inc., and Pitcairn Aviation of Pennsylvania, both of Pitcairn Field, Willow Grove, Pa., and Pitcairn-Cierva Autogiro Company of America, Philadelphia, Pa.

Publish Aviation Magazine

Kansas City, Mo.—The Aircraft Age, Inc., was recently chartered here to own and publish the Aircraft Age, an aviation magazine published monthly. J. Frank Smith, founder of the paper, is president and manager of the new company and Dan G. Stewart, secretary. With the following, they comprise the board of directors: William E. Morton, Kansas City postmaster and chairman of the committee on aeronautics of the Chamber of Commerce; Guy E. Stanley, president of Fairfax Airport; Matthew S. Murray, director of public works and builder of the Kansas City airport, and Dr. George

E. Halley, aeronautical announcer and member of the aeronautics committee of the Chamber of Commerce. Publication of the paper is handled by contract.

Election on \$4,000,000 Bonds

Birmingham, Ala.—A special election has been called February 11 on two bond issues aggregating \$4,000,000 to provide \$3,000,000 drainage bonds for widening, straightening and deepening the channels of Valley and Village creeks, and \$1,000,000 park bonds for the purchase of lands and the development of an airport.

REVISED PLANS FOR ST. LOUIS AIRPORT DEVELOPMENT

\$1,385,000 to Be Expended for Completing Project Financed Out of \$2,000,000 Bond Issue

St. Louis, Mo.—Following a request of the City Airport Commission, B. Russell Shaw Co., Inc., has presented a revised plan calling for further expenditures of \$1,385,000 to complete the municipal airport as provided under the \$2,000,000 bond issue passed 18 months ago.

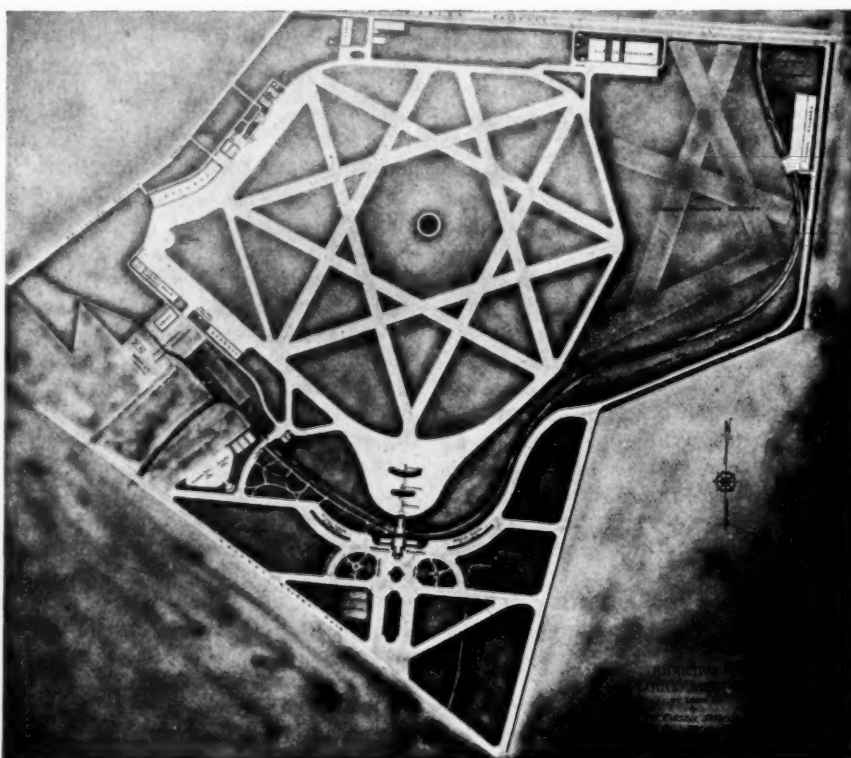
This revised plan, as indicated in the accompanying photograph, calls for a

\$44,457,000 Plane Production

As revealed in reports of 96 airplane manufacturers to the Aeronautical Chamber of Commerce of America, Inc., New York, according to dispatches from that city, the production of airplanes in 1929 represented a valuation of \$44,457,000, not including the value of motors. These producers, said to represent 91 per cent of all airplane production in the United States in 1929, turned out 5357 commercial planes, an increase of 51 per cent over the number for 1928 and 667 military planes, a decrease of 44 per cent.

double system of runways, \$150,000 terminal building, complete system of roads and drives, parking facilities, swimming and wading pools, concession buildings, additional hangar space, special hangars for the Air Service and the Naval Reserve, drainage and additional grading, fire fighting and medical equipment, fencing, etc.

One of the features of the design is separation of the student training activities from the main field. These activities have been assigned a large area in the northeast corner, with additional hangar space so there may be no conflict between student training and airline operation.

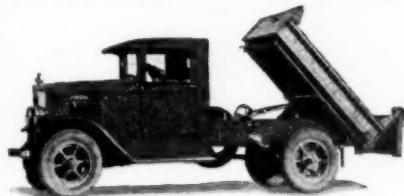


St. Louis Municipal Airport as it Will Appear When Complete

NEW AND IMPROVED EQUIPMENT

Lee Power Hoist Dump Bodies

The new Lee rocker type power hoist dump body which featured the exhibit of the Lee Trailer & Body Company, Inc., Plymouth, Ind., at the recent Road Show in Atlantic City, is a mechanical motor driven power unit designed especially for 1½-ton trucks. To meet an anticipated demand for loads not exceeding 2½ tons, the manufacturers have incorporated a number of improvements in this unit, outstanding features being its convertibility from a power hoist to



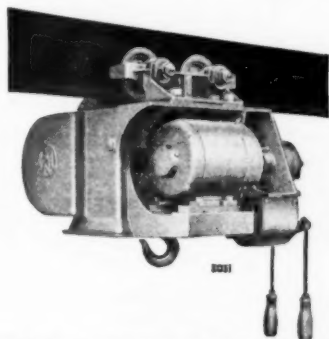
Designed for 1½-Ton Trucks

a hand hoist and the fact that it is interchangeable on various truck models. The hoist has a capacity of 2½ tons and the dumping time is 5 to 7 seconds. Its mechanism is made up of worm and gear running in oil and a simple train of slow-moving spur gears and pinions built integral with the sub-frame and connected to the upper frame of the hoist by two hoisting arms. Four bodies of different types may be mounted on this hoist, including the all-purpose body of 1 to 2 cubic yards, all-purpose body of 1½ to 2¼ cubic yards, removable side body of 1½ cubic yards and a water-tight garbage body of 2 to 3 cubic yards capacity. The Lee organization also manufactures a heavy duty power hoist of 3½ tons capacity, with mechanism similar to the rocker type power hoist; a rocker type underbody hand hoist of 2½ tons capacity, and an automatic gravity body.

Electric Hoists

The Hoist and Crane Division of Robbins & Myers, Inc., Springfield, Ohio, announce a complete line of electric hoists ranging in size from ½- to 7½-ton capacity. Outstanding features include a radical improvement in design, effecting a saving of weight and space, and a cast steel trolley adjustable to nine sizes of I-beams. Another feature is a safety constructed enclosed bottom block which keeps the rope on the sheaves and shrouds all parts so as to guide itself easily into the rope flare when swinging. Gearing is of alloy steel, heat treated, and hoisting mechanism is equipped with Hyatt roller bearings. The main frame is of AREMITE alloy metal produced in the Robbins & Myers foundry by electric

process and said to have a tensile strength of 35,000 pounds per square



Simplicity in Construction Is a Feature inch. An aluminum finish protects the hoist from exposure.

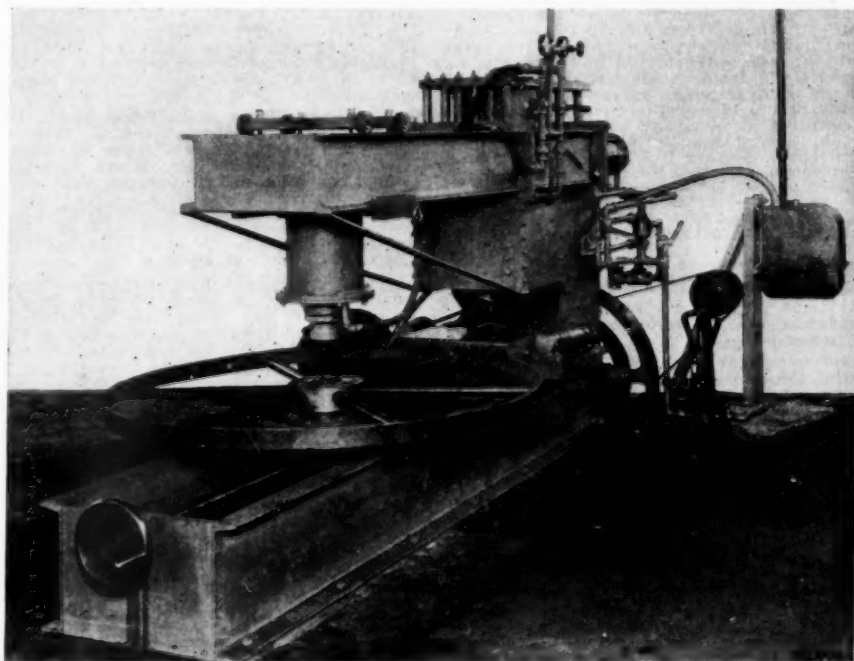
Flanging Machine

The Blue Valley Machine and Die Works, Kansas City, Mo., recently announced a new type Timken bearing flanging machine developed for flanging boiler and tank head, either flat, bulged, concave, round or square, but said to be easily adaptable for work on special shapes. The line includes four standard machines, each of which will take heads 18 inches to any diameter, and may be supplied with special attachments to take heads of smaller diameter. Construction of the machine is characterized by simplicity and strength and it is speedy in operation. The body is built of steel plate cut to shape and firmly bolted together, while the two extension members are made of heavy channel sections, the upper member being braced by two heavy

straps running from the end to the main frame and welded in place. The supporting spider is also of welded construction and spokes are of seamless tubing, set in holes drilled in the hub and welded to the rim. The hub is cut from steel forging and fits over a pin mounted on a Timken thrust bearing to reduce rotating friction. Overall dimensions of the machine are roughly 14 feet 8 inches long by about 6 feet high, and its weight is 6000 to 8000 pounds.

The flanging mechanism is mounted in the main frame, the high speed spinning process being used, the flange being bent up instead of down. Mechanism proper consists of two working rolls and a spinning roll, the latter being the only driven roll. Both are mounted in Timken bearings. The spinning roll is driven by back gears from a counter shaft, which in turn is driven through a silent chain by a 10 H P and up squirrel cage induction motor, both the roll spindle and counter shaft being mounted in Timken bearings. All operations for flanging the plate are performed through a centralized group of controls, so located that the operator has a clear view of the work at all times. When the flange is completed the working rolls and center hold-down are backed off, releasing the plate. As the result of the roll arrangement and control, flanges are made with no sign of distortion, it is said, or wrinkling in the finished head, despite the speed with which the operation is performed.

All Timken bearings are made by the Timken Roller Bearing Company, Canton, Ohio.



General View of Timken-equipped High Speed Flanging Machine

CONSTRUCTION DEPARTMENT

and

NEW ENTERPRISES

Covering the initial announcements of new undertakings with additional information about enterprises previously mentioned. The date at the end of an item indicates preliminary facts were given in a previous issue.

When writing to a new firm or corporation the name of at least one of the incorporators should be placed on the envelope to expedite its handling by the local postoffice. Mail may be delayed unless complete address is given.

Building and Construction Proposed and Contracts Awarded; Manufacturing, Mining, Power, and Land Developments; Public Works; Transportation; Communication; Financial Enterprises; New Business Opportunities Reported in the Sixteen Southern States.

The Daily Bulletin of the Manufacturers Record gives each business day advance news published in this weekly review. It is invaluable to those requiring prompt information. Subscription price \$40.00 a year.

Airports, Airplane Plants, Etc.

Ark., Russellville—City plans \$100,000 bond election for airport and other improvements.

Ga., Atlanta—Pitcairn Aviation, Inc., Sperry Bldg., Manhattan Bridge Plaza, Brooklyn, New York, changed name to Eastern Air Transport, Inc.; operates airmail routes connecting New York, Atlanta and Miami, Fla.

Ky., Lexington—Airport Committee of Lexington Bd. of Commerce interested in acquiring airport.

Mo., St. Louis—Moth Aircraft Corp., Lowell, Mass., advises regarding removal of plant to St. Louis: "No new buildings will be erected and no new equipment purchased."

Tex., Corpus Christi—Pan-American Aero Corp., Joe Palmer, Gen. Mgr., San Antonio, may erect airplane plant, conduct transportation student training course and establish airlines, Corpus Christi to San Antonio, El Paso, Laredo and Houston.

Va., Langley Field, Hampton—National Advisory Committee for Aeronautics, 3841 Navy Bldg., 17th and B St., N. W., Washington, D. C., advises let contract to W. P. Rose Co., Goldsboro, N. C., for seaplane channel, with asbestos and Portland cement covering, at \$171,000; all bids rejected for wind tunnel, new bids to be opened February 4, with following changes in specifications: Cone construction changed from steel plate to wood but alternate bids are requested, covering steel plate or other fire resisting material; piles are required for foundations; 8 windows deleted; specification of clear wire glass deleted; walkway in return passages and end changed from 3 ft. to 4 ft. in width; downspouts are required for draining roof gutters; between bents 12 and 17, covering material on inside walls shall terminate at line of ramp in return passages, but between bents 10 and 12 it shall extend down to plus 7 elevation; in place of 2-way switch in crane track, turntable substituted; concrete mixture changed from 1, 3, 4 to 1, 2, 4; paint requirements for inside struc. steel changed; bond required on covering material.

Bridges, Culverts and Viaducts

Proposed Construction

Ark., Fayetteville—Washington County, J. Lona Slaughter, Judge, contemplates bridge across Fly Creek, south of Clyde, near Fayetteville.

Georgia—War Dept., Washington, will hold public hearing Jan. 31 at Augusta, Ga., for approval of plans of State Highway Bd. of East Point, Ga., and State Highway Comm., of South Carolina, Columbia, for reconstruction of present bridges across Savannah River, at Sand Bar Ferry, below Augusta and Fifth St., Augusta: Plans for South Carolina side provide for raising westerly end about 5 ft. adding 3 steel deck spans, 131 ft. each on conc. piers, three 36.5-ft. spans conc. trestle, and fifty-three 15-ft. spans, timber trestle, conc. slab top; for Fifth St., Augusta bridge, used as crossing by U. S. States Highway No. 1, plans provide 9-span fixed bridge, replacing present draw bridge, using same piers extended to higher elevation, giving low water vertical clearance of about 44 ft.; Maj. D. L. Weart, Dist. Engr. 1-2, under South Carolina.

Ky., Louisville—Louisville & Nashville R. R., W. H. Courtney, Ch. Engr., Louisville, received low bid from E. R. McCracken Co., Chicago, \$93,700, for excavation, conc. retaining walls and steel work for underpass on Third St., south of Eastern Parkway; Dept. of Works will let contracts later for paving.

Ky., Louisville—City, A. T. Fisher, Special City Engr., preparing plans to eliminate grade crossing at Baxter Ave. station; depress Baxter Ave. and elevate railroad tracks.

Maryland—See Roads, Streets, Paving.

Md., Charlestown—State Roads Comm., Baltimore, received low bid from Forbes Murphy Construction Co., 326 S. Paul Street, Baltimore, \$7,366, for timber floor and earth approaches for single span steel girder Heiler's Bridge, over P. B. & W. R. R., north of Charlestown.

Miss., Lexington—Holmes County Bd. of Supvrs., Julia Hendrich, Clk., receives bids Feb. 3 for 2 bridges and approaches: 232-ft. bridge at Hastings Place, Dist. No. 2, creosoted piles and caps; 196-ft. bridge at Hastings Place, Dist. No. 2, creosoted piles and caps; approaches on 128-ft. river bridge at West, creosoted piles and caps.

Miss., Magnolia—Pike County Bd. of Supvrs., Charles E. Brumfield, Clk., receives bids Feb. 3 for 3 bridges: Near Lederer's place, Second Dist.; bridge in Fifth Dist.; near Gibson's; on Summit-Liberty road, Fourth Dist.

Miss., Senatobia—Tate County Bd. of Supvrs., L. P. Puryear, Clk., receives bids Feb. 3 for 2 bridges: 50-ft. steel truss bridge 18-ft. roadway, across creek on Tyro and Senatobia road; 80-ft. steel suspension bridge, 12-ft. roadway; 15 or 20 ft. approaches on each side.

Mo., Greenville—State Highway Dept., Jefferson City, will let contract in Apr. for bridge across St. Francis River at Greenville; P. H. Daniels, Div. Engr., Sikeston; War Dept., Washington, approved plans.

Mo., Jerome—House of Representatives, Washington, passed Senate bill, authorizing Jerome Bridge Co., to build bridge across Gasconade River, at Jerome.

Oklahoma—Texas—State Highway Comm., Oklahoma City, received low bids for 2 bridges over Red River, to be built by Oklahoma and Texas: Vincennes Bridge Co., Vincennes, Ind., \$238,886, for bridge between Terral, Okla. and Ringgold, Tex.; Tom L. Green, 125 S. Clegren St., Oklahoma City, \$247,588, for bridge between Thackerville, Okla., and Gainesville, Tex.; A. R. Losh, State Highway Engr. (12-19, under Texas-Oklahoma.)

Oklahoma—State Highway Comm., received low bids for 3 bridges. See Roads, Streets, Paving.

S. C., Columbia—See Roads, Streets, Paving.

S. C., Cottageville—Dist. Engr., War Dept., will hold public hearing Jan 31 at Charleston, S. C., on application of State Highway Comm., Columbia, for bridge across Edisto River at Hart's Bluff, 5 mi. from Cottageville; plans for part of bridge over channel of stream provide for steel superstructure, consisting of 3 spans on 4 conc. piers, spaced

50 ft. center to center, except those supporting center span, to be 60 ft. center to center; fixed type bridge, vertical clearance of 19 ft. above normal and 4.3 ft. above high water; horizontal clearance 56 ft. at center span.

Tenn., Dayton—House of Representatives, Washington, passed bill authorizing Dept. of Highways and Public Works, Nashville, to construct, maintain and operate bridge across Tennessee River on Dayton-Decatur road, between Rhea and Meigs Counties; also across Clinch River near Kingston Roane County.

Tenn., Kingston—See Tenn., Dayton.

Texas—State Highway Comm., Austin, receives bids Feb. 17 or 18 for 2 bridges and overpass, Henderson and Navarro Counties—3,004 ft. timber, steel and conc. bridge across Trinity River, Highway No. 31, Athens to Corsicana; One 200-ft. steel span, two 42-ft. 6-in. conc. girders, fifty 26-ft. girders, seventy-three 19-ft. treated timber pile trestle approach spans; estimated cost \$250,000; Goliad and Bee Counties—292 ft. steel and conc. bridge across Blanco Creek, Highway No. 12, at Bee-Goliad County line, between Beeville and Goliad, one 120-ft. steel span, six 28-ft. conc. girder spans; estimated cost \$40,000; Eastland County—312-ft. steel and conc. structure across Texas & Pacific Ry., Highway No. 1, about 1 mi. west of Cisco, also structure across stream parallel to Ry. line, 27-ft. clearance; 800 ft. approaches; estimated cost \$40,000; G. G. Eickline, Bridge Engr.

Tex., Big Spring—City, Howard County and Texas & Pacific Ry. Co., E. F. Mitchell, Ch. Engr., Dallas, plan viaduct over railway tracks at Benton St.

Tex., Cisco—State Highway Comm., Austin, and Texas Pacific R. R., E. F. Mitchell, Ch. Engr., Dallas, plan conc., steel overpass over railroad tracks on Highway No. 1, west of Cisco; cost \$45,000; G. G. Wickline, Bridge Engr., Austin.

Tex., Point Isabel—Point Isabel Co., promoting \$1,000,000 project for construction of causeway to connect Point Isabel with Padre Island, spanning Laguna Madre; engineers representing Seymour & Whittle, New York, making investigations.

Virginia—State Highway Comm., receives bids for 3 bridges. See Roads, Streets, Paving.

W. Va., Burnsville—State Road Comm., Charleston, requested U. S. Dist. Engr., to approve plans for bridge across Little Kanawha River near Burnsville, Braxton County.

W. Va., Clay—Clay County Court requested U. S. Dist. Engr. to approve plans to reconstruct highway bridge across Elk River, at Clay.

Contracts Awarded

Arkansas—State Highway Comm. let contracts for 6 bridges. See Roads, Streets, Paving.

D. C., Washington—Capt. H. C. Whitehurst, Ch. Engr., of Dist. Engr. Dept., advises, repair of Anacostia Bridge will begin Mar. 1; replace present floor with conc. slabs, surfaced with asphalt; install hand rails; total cost \$120,000.

Louisiana—Louisiana Highway Comn. let contracts for 24 bridges. See Roads, Streets, Paving.

La., Marksville—See Roads, Streets, Paving.

Miss., Columbia—Marion County Bd. of Supvrs., J. W. Rawls, Clk., let contract to Moss Construction Co., for overhead bridge over grade crossing of Gulf & Ship Island R. R. 1-2

Okla., Tulsa—Reid & Lowe, Birmingham, Ala., reported, have contract, \$38,121, for rein. conc. and steel underpass at St. Louis-San Francisco R. R. tracks, on Peoria Ave. at Archer St.; K. R. Tela, City Engr. 11-28

S. C., Calhoun Falls—Seaboard Air Line Ry. Co., W. S. D. Faucette, Ch. Engr., Savannah, Ga., let contract to Virginia Bridge & Iron Co., Roanoke, Va., for 250 tons steel structures, for Savannah River Bridge.

S. C., Whitmore—Seaboard Air Line Ry. Co., W. S. D. Faucette, Ch. Engr., Savannah, Ga., let contract to Virginia Bridge & Iron Co., Roanoke, Va., for 275 tons steel structures for Enoree River Bridge.

Texas—State Highway Comn., Austin, let contracts for causeway and bridge: Causeway across Copano Bay, Aransas County, Southwest L. E. Myers Co., Allen Bldg., Dallas, \$470,028; bridge over Sabine River between Bon Wier, Tex., and Merryville, La., on Texas State Highway No. 63, Austin Bridge Co., 1813 Clarence St., Dallas, \$179,240; Gibb Gilchrist, State Highway Engr. 1-2

Tex., Dallas—McKenzie Construction Co., Constitution Indemnity Bldg., has contract for conc. piers for Trinity River Bridge.

Tex., Port Arthur—Jefferson County Comn., B. B. Johnson, County Judge, Beaumont, let contract to Coastal Construction Co., Orange, \$22,101, to rebuild steel and conc. bridge over Taylor's Bayou on Port Arthur-Sabine road, near Gulf refinery; J. B. Converse & Co., Engrs., State Office Bldg., Mobile, Ala. and Port Arthur. 1-9

Canning and Packing Plants

Ark., Waldron—Lions Club, reported, interested in canning plant.

Fla., Pompano—W. M. Plummer, Pompano, reported, has contract for packing plant between Third and Fourth Sts.; 40x80 ft., with loading platform; 2 story; install modern equipment, operation of plant under direction of Pompano Packing Co. 1-9

Ky., Cloverport—Edward Gregory, Publicity Dept., Chamber of Commerce, advises local capital organizing canning company.

La., Violet—Delta Products Co., Inc., capital \$100,000, incorporated; Nell A. Armstrong, Jr., 711 Pere Marquette Bldg., New Orleans.

Miss., Ripley—Thomas E. Pegram and W. E. Clemmer, reported, acquired canning plant.

Okla., Tahlequah—Tahlequah Canning Co., L. C. Ross, Tahlequah, and H. W. Great-house, Fayetteville, Ark., interested in canning plant.

S. C., Orangeburg—Orangeburg Canning Co., capital \$20,000, incorporated; W. A. Livingston, H. L. Shuler; increase capacity of canning plant.

Tenn., Ooltamah—Proctor Brand Co., H. C. Brand, Mgr., constructing vegetable plant; 40 x80 ft., frame, conc. floors; will install 40 h. p. boiler and 25 h. p. engine; steam cooker, packing table, etc. See Want Section—Machinery and Supplies. 1-16

Tex., Donna—F. A. Taormina, 2700 Esplanade St., of Uddo-Taormina Corp., construct \$100,000 canning plant; 145x220 ft.; tile and conc.; conc. floor; capacity 250,000 cans daily; T. Taormina, Local Mgr.

Tex., Harlingen—Texas Citrus Growers Exchange, Ralph Bray, Editor Mission Times, Representative, reported, interested in erection \$100,000 citrus fruit packing plant at Harlingen and Brownsville.

Clayworking Plants

Mo., Mexico—Mexico Refractories Co., J. B. Arthur, has survey under way for switch tracks north of here preparatory to installing railroad facilities in connection with proposed fire brick plant; has 1000 acres under lease and option. 9-7

Mo., Mexico—A. P. Green Fire Brick Co., reported, secured clay leases on 1105 acres.

Coal Mines and Coke Ovens

Ala., Parrish—Bell Coal Co., P. O. address of plant Delmar, plans developing coal mines; John Smith, Engr., Jasper. 1-23

Okla., Muskogee—Seminole Coal Co. of Delaware, incorporated; James T. Sibbitt, Equity Bldg.

W. Va., Crumpler—United Pocahontas Coal & Coke Co. started erecting steel frame work for new twin tippie, making possible the loading of 5 cars at same time.

Cotton Compresses and Gins

Tex., Chilton—Shankle, Gardner & Levy Gin Co., capital \$25,000, incorporated; W. E. Shankle, J. W. Gardner.

Cottonseed-Oil Mills

Miss., Indianola—Indianola Oil Mill, J. H. Petty, Greenwood, reported, rebuild cotton seed oil mill, burned at loss of \$400,000.

N. C., Charlotte—Southern Cotton Oil Co., M. G. Gore, Mgr., plans rebuilding cotton seed oil mill burned at loss of \$200,000.

Drainage, Dredging and Irrigation

Louisiana—Bd. of Commrs. of Caddo Levee Dist., Shreveport, opens bids Feb. 19 for improving drainage in Willow-Lake Lateral, north prong extension, Caddo Parish, 12,400 cu. yd. excavation.

N. C., Charlotte—Mecklenburg Drainage Comn., James R. Alexander, Chrmn., Court-house, opens bids Feb. 3 for drainage improvements in Upper McDowell Creek Drainage Dist., consisting of 3.5 mi. of dredge ditches, approx. 38,000 cu. yd.; Will D. Alexander, Engr.

S. C., Georgetown—House Rivers and Harbors Committee, Washington, approved 154 mi. of waterway between Cape Fear River, N. C. and Georgetown, to cost approx. \$5,908,000, providing for last link of Atlantic Deeper Waterway between Trenton, N. J., and Miami, Fla.

Tex., Bay City—Gulf Coast Irrigation Co., V. L. LeTulle, Pres., started erecting large pumping plant, known as Gulf Coast Plant No. 3, consisting of 48-in. turbine pumps, each directly connected to 1000-h. p. motors and; irrigate rice lands. 12-19

Tex., Brownwood—Brown County Water Improvement Dist. No. 1, D. W. Ross, Dist. Engr., Brownwood, now acquiring right-of-way for reservoir and plans calling for bids in April for Brownwood dam.

Tex., Edinburg—Hidalgo County Water Improvement Dist. No. 5, H. V. Watts, Sec., Donna, reported, voted \$90,000 bonds for irrigation work. 12-12

Tex., Laredo—Francisco Farias authorized by State Bd. of Water Engrs., Austin, to apply water from north branch of Manadas Creek, a tributary of Rio Grande, to irrigate 1,484.17 acres, comprising 2 separate tracts in Porcoines 19 and 20, Webb County.

Tex., Mercedes—Hidalgo and Cameron Counties Water Control and Improvement Dist. No. 9, W. C. Wise, Sec., Mercedes, opens bids Feb. 10 for constructing gunite lined canals and pipe lines; 3,500,000 gunite line 1 in. thick, reinforced with wire mesh, including rough earthwork and fine trim therefor; gates and 5 ft. of corresponding size of conc. pipe with each gate, size 12 in., No. 33, 14 in., No. 500, 18 in., No. 100, size 24 in., No. 33; 18,000 sq. ft. gunite lining in checks, based on 1 in. thickness, including rough earthwork and fine trim therefor; 1850 cu. ft. gunite in siphons, bridges and other structures, including excavation; conc. pipe in siphons and drops, including earthwork, size 14 in., 180 lin. ft.; 16 in., 180 lin. ft.; 18 in., 240 lin. ft.; 20 in., 180 lin. ft.; 24 in., 240 lin. ft.; 180 lin. ft.; 520 cu. ft. conc. in cradles for pipe; conc. pipe in pipe lines—size 12 in., 1800 lin. ft.; 14 in., 5300 lin. ft.; 16 in., 3500 lin. ft.; 18 in., 5200 lin. ft.; 20 in., 3500 lin. ft.; 24 in., 900 lin. ft.; 30 in., 900 lin. ft.; 900 cu. yd. earthwork; excavation of canal bank, excess earth above and average of 10 in. top of lining.

West Virginia—Carbide & Carbon Chemicals Corp., 437 East Ave., New York, applied to U. S. Engr. Office, Huntington, for permission to improve left bank of Kanawha River back channel at Blaine Island by constructing culvert for Hazlett's branch, old creek bed; construct pump and water intake house on right bank of river above Witchee's creek, Diamond, Kanawha County.

Electric Light and Power

Electric light and power work in connection with many LAND DEVELOPMENT operations involves the expenditure of large sums of money. See that classification for details.

Alabama—Southern Cities Power Co., Provident Life Bldg., Chattanooga, Tenn., and Public Light & Power Co., 1612 Market St., Philadelphia, Pa., reported, applied to Alabama Public Service Comn., Montgomery, for permission to sell electric system and properties in 8 Alabama towns to Alabama Power Co., Birmingham; towns included are Scottsboro, Stevenson, Bridgeport, Mt. Carmel, Fackler, Larkinsville, ville, Hollywood, etc.

Ky., Louisville—Kentucky Utilities Co., reported, plans expending \$2,879,347 for construction and maintenance in 1930. 12-5

Louisiana—Gulf States Utilities Co., Beaumont, Tex., reported, expend \$300,000 during 1930 for extension lines to serve number of towns and villages.

Louisiana—Southwestern Gas & Electric Co., Shreveport, A. Lieberman, Pres., plans construction budget of \$4,000,000 for 1930; work includes expansion and improvement of steam generating station; installation of more substation capacity; erection of new transmission lines, cost \$2,858,000; office building, gas distribution system, street railway and ice plant improvements, cost \$500,000; miscellaneous extensions, rural extensions and real estate purchases, cost \$650,000; work includes large construction programs in Shreveport, La.; Texarkana, Marshall, and Longview, Tex.; Fayetteville, Ark., as well as smaller projects in almost every town served by company in East Texas, North Louisiana and West Arkansas.

La., Amite—Louisiana Power & Light Co., Algiers, advises contract has been signed with Bogalusa Paper Co., Bogalusa, to furnish 5000 h. p.; company will construct 40 miles of 110 kv. wood pole H frame transmission line from Amite to Bogalusa, build extension of Amite substation, and construct step-down substation at plant of Bogalusa Paper Co.; cost of line and substations \$300,000; W. O. Turner, Ch. Engr. 1-23

La., New Orleans—Public Service Co. extend white way lighting system on Magazine St., 10 mile stretch from Lee Circle along St. Charles Ave. to intersection of Clairborne Ave.; also install white way lights in Algiers.

La., Winnfield—Gulf Public Service Co., 205 Planters Bldg., St. Louis, Mo., plans expending \$75,000, improvements to lighting system; install engine, white way lights, etc.

Miss., West Point—City, reported, accepted bid of \$1,000,000 by Mississippi Power Co., Gulfport, for light and water plant. 1-23

Mo., Kansas City—Kansas City Power & Light Co., reported, construct \$50,000 substation, Forty-seventh St. and Broadway; H. G. Freshman, Fourteenth and Grand Aves., Archt.

Mo., Sikeston—G. L. Blanton, Editor, Sikeston Standard, reported, interested in erecting light and water plant.

North Carolina—Nantahala Power & Light Co., J. E. Thorpe, Calderwood, Tenn., reported, considering construction of single dam across Little Tennessee River, 2 miles below Fontana; 400 ft. high; create lake 37 miles long; company's engineers making survey to determine feasibility of project. 11-14

N. C., Lexington—Bd. of Supervisors, reported, ordered construction of electric line from Tyron to Linwood.

Okla., Ada—City voted to grant light franchise to Oklahoma Gas & Electric Co., Oklahoma City. 1-16

Okla., Purcell—City plans improvements to electric light system.

Okla., Weleetka—Public Service Co., of Oklahoma, Tulsa, advises, following equipment purchased for power plant; Condensing equipment, from Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa.; two steam generating units, Babcock & Wilcox Co., 85 Liberty St., New York; air cooled furnace walls, M. H. Detrick Co., 150 S. Dearborn St.; duplex bilge pump set, Yeomans Bros. Co., 1416 Dayton St., both Chicago, Ill. 1-16

Tenn., Maryville—City, reported, considering installation white way on various streets.

Tenn., Ripley—West Tennessee Power & Light Co., care of National Power & Light Co., 2 Rector St., New York, reported, plans \$100,000 expansion program.

Tex., Cleburne—City, reported, plans light and power plant. See Financial News Columns.

Tex., San Antonio—Central Power & Light Co., E. B. Neiswanger, Pres., expend \$7,000,000 during 1930 in improvements and extensions; will place in operation hundred miles of high power electric transmission lines; distribute electricity in communities in South and Southwest Texas; erect ice plants; some of major projects contemplated are: Gulf Coast District—trunk transmission line from Robstown through Bishop, Kingsville, Premont and Falfurrias to interconnect with line to be built from Laredo to Falfurrias; improvements and extensions to electric distribution system at Corpus Christi, Alice, Beeville, Robstown, Sinton, Taft and Odem; erect store room and garage at Kingsville; drill water well at Falfurrias, make extension water system at Taft; improve transportation service in Corpus Christi; Valley District—extend transmission line from San Benito to Weslaco to tie in with Pharr and Edinburg, also additional line to Los Fresnos—Point Isabel irrigation district; extend and improve local distribution systems at Alamo, Donna, Edinburg, Harlingen, La Feria, Lyford, Raymondville, Rio Grande City, San Benito, San Juan and Weslaco; increase substation capacity at West Brownsville; erect cold storage plant of 100 car capacity at Harlingen, also ice plant at Raymondville; enlarge ice plants at Rio Grande City, at Harlingen; enlarge ice vault at Donna; add to and improve Harlingen water filtration; water distribution systems at San Benito, McAllen and Mercedes; Guadalupe District—build high tension line south of Kenedy to connect with company's transmission system at Beeville; construct line between Westhoff to Smiley; improve lines in Dorst and Joe Brunner oil fields; construct electric line out of Yorktown; addition to company's office building at Kenedy; extend distribution systems at Cuero, Gonzales, Moulton, Runge, Waelder and Yorktown; water distribution additions and extensions at Luling; Rice Belt District—construct electric line out of El Campo to serve Danevang and surrounding rural area; build lines to serve major irrigation projects near Bay City and Garwood; replace present line from El Campo to Hahn; improve and extend electric distribution system at Bay City, El Campo, Glidden and Eagle Lake; replace ice plant at Edna with one of greater capacity; Victoria District—improvements and extensions to distribution system at Victoria; San Antonio District—electric distribution system extensions and improvements at Comfort, Cotulla, Devin, Fredericksburg and Jourdanton; Winter Garden District—electric line from Camp Wood to Barksdale, additional lines from Crystal City; complete high power transmission line between Uvalde and Sonora; improve electric distribution system at Carrizo Springs; Laredo District—transmission lines from Laredo through Miranda City and Hebbronville to Falfurrias; electric service contemplated for both Zapata and Ingavio; general improvements to electric distribution systems at Laredo, Hebbronville and Miranda City and water distribution system at Laredo; Del Rio District—complete 20,000 h. p. steam generating plant on Devils River; several line extensions out of Del Rio to serve rural areas; erect ice retail station and vault at Del Rio; Big Bend District—provide electric service to Valentine, erect generating plant and distribution system; install additional power plant capacity at Marfa; erect transmission line between Balmorhea and Hoban; rebuild and improve rural lines in and about Presidio; improve distribution systems at Marfa and Alpine; construct ice plants at Balmorhea and Presidio and Marathon.

Va., Bremon Bluff—Virginia Public Service Co., Charlottesville, reported, acquired 100 acres at Bremon Bluff for development of \$1,000,000 hydro electric project.

West Virginia—C. H. Lantz, Deep Run Big Vein Coal Co., Piedmont, interested in locating steam electric generating plant including construction of dam on Potomac River to impound water during dry season; plant to use coal for fuel; Ben W. Robinson, Const. Engr., Piedmont, and David G. Martin, Surveyor, also studying proposition.

Fertilizer Plants

Tex., Nacogdoches—Texas Fertilizer Co., capital \$50,000, incorporated; I. L. Sturdevant, Sam Hayter.

Flour, Feed and Meal Mills

Mo., St. Louis—Mo-Pak Milling Co., capital \$20,000, incorporated; Norman F. Paule, 2707 Loughborough Ave.

Foundry and Machine Plants

Ark., Little Rock—Arkansas Foundry Co., 1500 E. 6th St., expending \$75,000 for improvements.

Tex., Wichita Falls—M. & V. Tank Co., Iowa Park Rd., increasing capital \$150,000 to \$225,000.

Garages and Filling Stations

Ala., Dothan — W. C. King establish warehouse; Goodyear Tire & Rubber Co., Akron, Ohio, Lessee.

Ark., Little Rock—Gulf Refining Co., John B. Thomas, 1509 E. Ninth St., plans filling station 3000 Prospect Ave.; 1 story, brick veneer.

Fla., South Jacksonville, Jacksonville — Shell Petroleum Corp., C. D. Crites, Dist. Mgr., Lynch Bldg., and Shell Bldg., St. Louis, Mo., broke ground for filling station, San Marco Blvd. and Riviera St.; S. S. Jacobs Co., Gen. Contr., Lutz Realty Bldg.

Ga., Atlanta—Massell Realty Co., E. C. Seiz, 161 Spring St., N. W., erect filling station; conc., brick, comp. roof, struc. steel; excavation started; day work; Shell Petroleum Corp., Shell Bldg., St. Louis, Mo., Lessee.

Ga., Columbus—L. D. Hill, care Hill Realty Co., 6 13th St., soon receives bids for filling station, First Ave. and 14th St.; Chas. F. Hickman, Archt., Swift Bldg.

Ga., Dalton—Farrar Lumber Co., capital \$25,000 formed by J. K. Farrar; lumber manufacturer and distributor.

La., Monroe—Ethrledge Atkins Corp., capital \$45,000, incorporated; W. L. Ethrledge, 2101 St. John Drive; automobiles and filling stations.

La., Shreveport—Sparco Gasoline Co., Slattery Bldg., leased filling station, Centenary Blvd. and Wilkinson St.

La., Shreveport—Spradling Auto Top Co., 127 N. 2nd St., Paducah, Ky., leased building, 1806 Texas Ave., for distribution plant for automobile tops, curtains, seat covers, trimmings, etc.; later to be converted into manufacturing plant.

Md., Baltimore—St. Paul Garage Co., W. Bond Collins, Pres., Light and Redwood Sts., let contract to Thomas Mullan, 3945 Greenmount Ave., for razing buildings on site of proposed garage, St. Paul and Saratoga Sts.; started clearing; Wyatt & Nolting, Archts., Keyser Bldg.

Md., Baltimore—Standard Oil Co. of New Jersey, Standard Oil Bldg., erecting filling station, Frederick Rd. and Augusta Ave.; plans and construction by owner.

Mo., Baltimore—Argonaut Realty Corp., Div. of General Motors Corp., Research Bldg., Detroit, Mich., let contract to John Golder, for parts warehouse and sales office building, Fort Ave., near Key Highway; 1 and 2 story, approx. 114x290 ft., brick; to be occupied by Chevrolet Motor Co., Homewood Ave., near Bartlett St.; Albert Kahn, Inc., Archt., Marquette Bldg., Detroit, Mich. 10-17

Mo., Joplin—Southwestern Bell Telephone Co., St. Louis, erect warehouse and garage, Fourth St. and Picher Ave., with locker room and shower facilities for linemen; contract to be let in few days; 55x95 ft., steam heat, storm-proof, steel, woven-wire fence, surrounding; George Smith, Mgr., Joplin, Div., 705 Porter St.

Mo., Joplin—Phillips Petroleum Co., L. E. Phillips, Pres., Bartlesville, has plans drawn for 4 filling stations; 1 story, brick; total cost \$20,000; private plans.

Mo., Kansas City—R. W. Loewer acquired garage, 27th St. and Sruce Ave.

Mo., Kansas City—National Garage Co., H. A. Rubin, Pres., 1308 Main St., reported, probably take bids on \$800,000 garage and store rooms about Feb. 15; G. E. McIntyre, Engr., Finance Bldg.

N. C., Greensboro—Adamson Cadillac Co., capital \$100,000, incorporated; Norman A. Boren, Jefferson Standard Bldg.

N. C., High Point—W. and M. Motor Co., capital \$100,000, incorporated; John F. Weber, 305 Sunset Drive.

N. C., Lexington—Lexington Public Service Co., capital \$40,600, incorporated; C. H. Timberlake, W. E. Raper; deal in motor vehicles and operate motor buses.

S. C., Charleston — Firestone Tire Stores, Inc., 177 Meeting St., let contract to Dawson Engineering Co., 11 Gillon St., for service station, Meeting and Ann St.; J. D. Newcomer, Archt., 32 Broad St.

S. C., Greer—Dr. J. T. Smith started erecting garage, Davis property; City Motor Co., Lessee.

Tenn., Chattanooga—Southern Auto Supply Co., D. A. Graves, Gen. Mgr., 615 Broad St., opens bids Feb. 3 for \$80,000 building, Broad near Fifth St.; rein. conc., steel, wood, brick, 50x120 ft., 1 story and basement, conc. ramp leading to basement; Maxwell James, Archt., Providence Bldg.

Tenn., Knoxville — Jesse Bland, of Hot Blast Coal Co., 749 Western Ave., may erect filling station, between Henley St. and Broadway.

Tenn., Nashville—Firestone Tire & Rubber Co., Akron, Ohio, care Hancock Tire Service Co., 904 Broad St., Nashville, opens bids Jan. 31 for service building, West End, 25th Ave. and Elliston Pl.; includes 5 store units and large service station; 2 story, 172x103x177 ft.; Marr Holman, Archts., Stahlman Bldg.

Tex., Houston—Auto Salvage Corp., capital \$12,000, incorporated; E. J. Brann, 2002 McGregor St.

Tex., Houston — J. O. Goodman, 1549 Heights Blvd., erect filling station, 16th St. and Heights Blvd.

Tex., San Antonio—O. C. Bobbysell, 1227 Broadway, let contract to K. G. Granbert, Aztec Bldg., for garage, Broadway and Sixth St., at \$18,297; Chas. Boelhaue, Archt., Aztec Bldg.

Gas and Oil Enterprises

Kentucky—Missouri-Kansas Pipe Line Co., 120 S. LaSalle St., Chicago, Ill., reported, plans development of oil properties in Western Kentucky.

La., Hammond—Paramount Oil & Gas Co., capital \$100,000, incorporated; Henry W. Wallace, Poplarville, Miss.; Duck Wall, Purvis, Miss.

La., Lafayette—Representatives of various towns, including Oakdale, Abbeville, Bunkle, Lafayette, etc., F. V. Mouton, Sec. Mgr., Central Committee, reported favorably on obtaining natural gas in this section; recommendations include 2 proposals, delivering gas at city gates with distribution to be handled separately, and for distribution and delivery at city gates; considering bond issue for various towns.

Mo., Fredericktown—Missouri Natural Gas Co., 1017 Olive St., St. Louis, applied for natural gas distribution franchise.

N. C., Fayetteville—McMillan-Shuler Oil Co., capital \$50,000, incorporated; A. B. McMillan, Paul K. Shuler.

N. C., Hendersonville — Golden Belt Oil Co., capital \$15,000, incorporated; A. B. Wester, W. B. Daniel, Jr.

N. C., Raleigh—Raleigh Gas Co., 414 Fayetteville St., Walter Whetstone, Pres., let contract to Stacy Bros. Gas Construction Co., Cincinnati, O., for gas plant; install gas storage holder, 250,000 cu. ft. capacity; cost \$75,000; auxiliary piping, including station governor and meter; C. F. Mundor, 1612 Market St., Philadelphia, Pa., Constr. Engr.

Okla., Chandler — Texas Co., Philtower Bldg., Tulsa, reported, plans \$40,000 oil pipe line.

Okla., Guthrie—Empire Oil & Refining Co., Bartlesville, purchased 1500 tons of steel for six 80,000 bbl. storage tanks from Kirk-Morrow Iron Works, Iola, Kans., to be installed at existing oil pump station near here; construction under supervision of Empire Companies.

Okla., Muskogee — Mid-Continent Oil Co., Chas. M. Murrie, Cosen Bldg., Tulsa, reported, let contract to F. H. Mattern, Commercial Bldg., Tulsa, for bulk station and grease house; corrugated iron and steel.

Okla., Tulsa—Commerce Royalty Co., incorporated; S. R. Mealey, 1622 S. Newport St.

Tex., Albany—Frontier Production Co., incorporated; W. L. Hays, J. C. Lertz.

Tex., Big Spring—Consumers Natural Gas & Power Co., subsidiary of Southern Gas Utilities, Inc., Milam Bldg., San Antonio, reported, let contract to F. G. Hoffman & Co., 4000 Windsor St., Dallas, for constructing 37 mile 8-in. gas pipe line from city to South Plains Pipe Line Co.'s 10-in. main; contract let to Republic Supply Co., Petroleum Bldg., Houston, for furnishing 17 mile of 8-in. pipe; cost \$250,000; Big Spring Public Service Co., has franchise to distribute natural gas within city limits.

Tex., Kerrville — Joe Burkett, 1623 W. Kings Highway, San Antonio, reported, has franchise; install manufactured gas plant and distribution system; will lay 16 mi. pipe line in city, build 3 regulator stations.

Tex., Luling—Magnolia Refinery, Magnolia Bldg., Dallas, reported, enlarge and reconstruct plant.

Tex., Midland—Trans-Texas Oil Co., capital \$500,000, incorporated; T. J. Cody, Big Lake; R. R. Sims, Midland; will acquire properties of J. D. Young Corp., in Texas.

Tex., Port Arthur—Gulf Refining Co., Pittsburgh, Pa., plans expansion program during 1930.

Tex., Tyler—Dennis Oil Co., organized; L. W. Dennis, Pres.; leased 1423 acres near Edom.

Va., Berkley, Ind. Sta. Norfolk—Shell Eastern Petroleum Products, Inc., 141 Milk St., Boston, Mass., reported, plans \$112,000 oil storage and distributing terminal located between docks of Imperial Tobacco Co. and South end of Berkley bridge; build wooden wharf 240 ft. long; 20,000 bbl. tank, cost \$18,000; three 10,000 bbl. tanks, cost \$45,000; four 5,000 bbl. tanks, cost \$32,000; \$2500 office building \$5000 warehouse.

Va., Clifton Forge—City receives bids Feb. 14 for gas franchise; United Fuel and Gas Co., subsidiary of Columbia Gas & Electric Co., 61 Broadway, N. Y., negotiating. 1-23

Va., Norfolk—Norfolk Oil Corp., capital \$100,000, incorporated; J. Edgar Pew, 1608 Walnut St., Philadelphia, Pa.

West Virginia—Columbia Gas & Electric Corp., 61 Broadway, N. Y., reported, organized Appalachian Oil Development Co., to take over oil interests of 6 of Columbia Gas & Electric Corp.'s natural gas subsidiaries, operating in West Virginia and Pennsylvania.

West Virginia—Stockholders of Southern Pipe Line Co., reported, approved sale of certain pipe lines and rights of way of Eureka Pipe Line Co., Oil City, Pa., to Manufacturers Light & Heat Co., Columbia Bank Bldg., Pittsburgh, Pa., controlled by Columbia Gas & Electric Co., 61 Broadway, New York.

W. Va., Bluefield—Bluefield Gas & Power Co., S. B. Thompson, Mgr., has franchise to furnish natural gas to city; have applied for franchise in about 10 other towns; Boozo Co., Bozoo, let contract for 2 wells in Monroe County; Monroe Gas & Oil Co., Charleston, let contract for another well; Bluefield Gas & Power Co. and Roanoke Gas Co., Roanoke, Va., contemplate using natural gas if it is found in sufficient quantities at Bozoo; both companies are subsidiaries of Central Public Service Corp., Chicago, Ill. 1-23

Ice and Cold-Storage Plants

Tenn., Martin—Kentucky-Tennessee Light & Power Co., 61 Broadway, New York, acquired ice plant of City Ice & Coal Co.; expend \$10,000 or more for new machinery.

Tex., San Antonio—See Electric Light and Power.

Va., Lynchburg—Mount Lime & Chemical Corp., Lynchburg, W. D. Mount, Pres., Saltville, erect lime and dry ice plant. (See Mining).

W. Va., Romney—National Fruit Product Co., Woodward Bldg., Washington, D. C., advises not planning erecting cold-storage warehouse here. 1-23

Iron and Steel Plants

Ala., Alabama City—Virginia Bridge & Iron Co., Roanoke, Va., has contract for 350 tons for building of Gulf States Steel Co., Brown-Marx Bldg., Birmingham.

Land Development

Fla., Coral Gables—Pony Golf Links, Inc., chartered; John K. Tilton, Olympia Bldg.

Fla., Lakeland—Lakeland Home Owners, Inc., chartered; A. J. Pruitt, 832 S. Mississippi Ave.

Fla., Miami—Enched Corp., incorporated; M. E. Sibley, 1st Natl. Bank Bldg.

Fla., Miami—L. C. Gardner Co. chartered; L. C. and M. M. Gardner, 821 N. W. 7th St.

Fla., Miami Beach—City votes on purchase of Miami Beach golf course on Lincoln Rd.

Fla., Miami Beach—Taradash Properties, Inc., chartered; Henry D. Williams, Seybold Bldg.

Fla., Orlando—Alco Groves, Inc., chartered; E. H. and F. W. Allen, 405 E. Livingston St.

Fla., Sarasota—Win-Flor Co., incorporated; H. M. Winslow, Orange Ave. & Hyde Park.

Ga., Savannah—Karpf Realty Co., capital \$25,000, incorporated; Max Richmand, 315 W. Brighton St.

Ky., Louisville—Winter Realty Co., capital \$40,000, incorporated; Robt. T. Burke, Inter-Southern Bldg.

Ky., Russellville—Russellville Development Co. incorporated; C. S. Milan, M. I. Lawson.

La., Baton Rouge—Feliciana Realty Co., Inc., chartered; J. H. and J. H. Percy, Jr., Bank of Baton Rouge Bldg.

La., Glenmora—Milner Realty Co., Inc., capital \$20,000, incorporated; Dufer J. Milner, Enoch M. Pringle, Jr.

La., Natchitoches—E. P. Thomas, St. Louis, Mo., develop 100 acre subdivision with frontage on Cape Fear River.

Miss., Crystal Springs—Cherry Grove Plantation, capital \$50,000, incorporated; W. S. Grantham, S. M. Thompson.

Miss., Hazelhurst—J. S. Gilbert acquired 350 acres in Copiah County.

Miss., Hazelhurst—J. N. Newell acquired 1400 acres in Copiah County.

Mo., Cape Girardeau—City develop 2-acre park on Rockwood Place.

Mo., Kansas City—Lake View Heights Land Co., capital \$50,000, incorporated; George H. Imbrie, 3429 Montgall St.

Mo., St. Louis—City Front Realty Co. incorporated; Harry Brinkop, 4431 S. Grand St.

N. C., Charlotte—Sharon Golf Club, capital \$50,000, incorporated; C. N. Lavery, 301 S. Coll St.

N. C., Greensboro—Carolina Golf Course, incorporated; H. DuPont Baldwin, Greensboro Bank Bldg.

N. C., Reidsville—Mills River Investment Co., capital \$50,000, incorporated; S. B. Cathey, Ora K. Rhodes.

Tenn., Chattanooga—Dallas Heights Land Co., reported, acquired 56 acres in Dallas Heights.

Tex., Corpus Christi—Perry Maxwell, Golf Archt., Ardmore, Okla., interested in establishing golf course.

Tex., Goose Creek—Ozark Comm., Mrs. Thomas L. Pruett, plans developing park.

Tex., Jasper—Henderson Realty Co., capital \$30,000, incorporated; J. A. and R. W. Henderson.

Tex., Plainview—See Roads, Streets, Paving.

Tex., San Angelo—Judge L. J. Wardlaw, W. T. Waggoner Bldg., Fort Worth, reported, acquired 11,480 acre ranch in Uvalde County; will fence entire property.

Va., Glade Spring—Ryburn Farms, Inc., capital \$50,000, chartered; Carter Ryburn.

Lumber Enterprises

Ala., Mobile—Navco Hardwood Co., E. V. Knight, New Albany, Ind., enlarge facilities.

Fla., Jacksonville—Terrell Chasson Lumber Co., Greenleaf-Crosby Bldg., changed name to Holly-Terrell Cypress Co., Inc.

Ga., Louisville—T. B. Kelley Lumber Co., Louisville, Ga., sawmill operator, acquired timber tract on Augusta-Wrens Rd., known as Fleming tract, containing over 1,000,000 pine and other wood; soon place mills in tract.

Ga., Thomaston—Southmont Mfg. Co., Talbot, reported, acquired 20,000,000 ft. timber near here; several small mills to be established soon on tract.

La., Alexandria—Elcher-Woodland Lumber Co., Inc., J. M. Eichner, Guaranty Bk. Bldg., increased capital to \$300,000.

La., Ferriday—J. M. Jones Lumber Co., J. M. Jones, rebuild at once mill, office, retail yard, dry kilns and planing mill recently burned with \$325,000 loss.

La., Glenmora—Hillyer-Fuller-Edwards Lumber Co. constructing railroad from mill to Cocodrie tract, recently purchased; installing water tube boiler, doubling capacity of mill and installing modern power plant.

N. C., Franklin—Osborne Lumber Co. erecting planing mill.

Okla., Bartlesville—Overlees-Kruse Lumber Co., J. L. Overlees, erect \$10,000 building, Third and Cherokee Sts.; 2 story, terra cotta, stucco.

Tex., Houston—J. W. Murdock Lumber Co., Inc., capital \$20,000, chartered; T. E. Gamage, Esperson Bldg.

Mining

Fla., Cedar Key—Treasurer Mining Co., incorporated; W. M. Fowler, A. Q. Nelson.

N. C., Mt. Airy—Virginia Bridge & Iron Co., Roanoke, Va., has contract for 180 tons steel for gang saw shop of North Carolina Granite Corp.

Tex., Presidio—Co-Operative Co., care Chamber of Commerce, Marfa, reported, preparing plans for \$3,000,000 ore smelter at Conchas and Rio Grande Rivers near here.

Tex., San Antonio—City, Paul Steffer, Street Commr., soon acquire 15-acre gravel pit, Castroville Rd., for street construction and repair work.

Va., Lynchburg—Mount Lime & Chemical Corp., Lynchburg, W. D. Mount, Pres., Saltville, erect lime and dry ice plant near Natural Bridge of Virginia, to produce 120 tons lime and 100 tons dry ice daily; company owns 375 acres; completed prospecting large deposit of stone, principal ingredient of company's products.

Miscellaneous Construction

Fla., Jacksonville—U. S. Engr. Office, Jacksonville, Fla., let contract to J. H. Coppedge & Co., 204 E. Bay St., Jacksonville, for paving with riprap easterly end of Wards Bank Training Wall, St. Johns River, near inner end of south jetty. 12-12

Ga., Macon—Baconfield's Park Bd., Mayor G. Glen Toole, Chrmn., plans constructing swimming pool and other recreational features in Baconfield's Park.

Ky., Owensboro—J. L. Trumbo, Executive Agt., and C. J. Meredith, Supt. of Wards, Kentucky Game & Fish Comm., Frankfort, authorized to obtain quotations on tract in Daviess County for fish hatchery.

Louisiana—Bd. of Commrs. of Caddo Levee Dist., Courthouse, Shreveport, opens bids Feb. 13 for constructing 7 premeable crib deflection dykes, or current retards in Rattling Slough Bend, Caddo Parish, Red River, right bank, total length about 1030 lin. ft.

La., Natchitoches—Natchitoches Parish Game & Fish Comm., H. Lee Prather, Chrmn., engaged J. C. Forsythe, Forest Hill, to make inspection of possible available locations in parish for fish hatchery.

La., New Orleans—Bd. of Commrs., Orleans Levee Dist., New Orleans Court Bldg., let contract to John Riess, New Orleans Bank Bldg., at \$355,896.45, for constructing locks in New Basin Canal and in Bayou St. John; W. C. Davey, Acting Ch. Engr., Orleans Levee Dist. 1-23

Maryland—Claiborne-Annapolis Ferry Co., Court of Appeals Bldg., Annapolis, let contract to John H. Bailey, Easton, for pier, Kent Island; 140x130 ft., with slip for double end ferry boat landing; Kastenhuber & Anderson, Engr., Stewart Bldg., Easton. 1-23

Mo., Joplin—George W. Wadleigh and Mrs. H. C. Coger, executors, Mrs. Mary R. Blackwell Estate, erect \$30,000 private mausoleum, Mount Hope Cemetery; 8 crypts.

Mo., Kansas City—U. S. Engr. Office, Postal Telegraph Bldg., has low bid from Woods Bros. Construction Co., 132 S. 13th St., Lincoln, Neb., for constructing about 9220 lin. ft. standard pile clump dikes and 14,300 lin. ft. standard revetment, or alternately 9220 lin. ft. standard retards and 14,300 lin. ft. standard revetment, Missouri River, Doniphan Bend, about 6.4 mi. from Atchison, Kans. 1-2

Mo., South St. Joseph—U. S. Engr. Office, Postal Telegraph Bldg., Kansas City, has low bid from Massman Construction Co., American Bank Bldg., Kansas City, for constructing about 400 lin. ft. standard pile clump dikes and about 10,900 lin. ft. standard revetment, Missouri River, Contrary and Palermo Bends. 1-2

Tenn., Chattanooga—Bd. of Highway Commrs., T. S. Wilcox, Chrmn., Courthouse, opens bids Feb. 28 for constructing 1300 ft. vehicular tunnel through Missionary Ridge, together with approach roads leading thereto; E. G. Murrell, County Engr., Courthouse. 8-15

Tenn., Memphis—Lake Macon, Inc., J. W. Stone, Pres., 32 W. Iowa St., establish 95-acre lake by constructing 2-mi. dam, in connection with beach, swimming course, bath houses and boat house, baseball diamond, tennis courts, golf course, ice and roller rink, park, etc.; Joseph P. Carey, Engr. in charge of development.

Va., Newport News—Chesapeake & Ohio Ry. Co., C. W. Johns, Ch. Engr., Richmond, construct new low level coal pier, costing over \$1,600,000, to double company's coal delivery capacity, and construct \$1,500,000 merchandise pier.

West Virginia—See Electric Light and Power.

Miscellaneous Enterprises

Ala., Montgomery—Swift & Co., Union Stock Yards, Chicago, Ill., acquired property of White Packing Co., North Montgomery, near Union Stock Yards; plans erecting meat packing plant and enlarging and improving plant of White Packing Co.

Ark., Blytheville—R. L. Dedman, Radio Engr., plans erecting plant to manufacture radio test instruments of his own design, early in 1930.

Ark., Rogers—Blanch White acquired Rogers Dye Works.

Fla., Jacksonville—America's Play-Ground, Inc., being formed by E. Z. Jones and associates to organize fishing, hunting and recreation clubs; plans erecting 4 log-cabin club houses in different sections of state, each with 150 rooms and in connection with each club house 100 log cabins with airport, golf links, tennis court, etc.

Fla., Miami—Miami Toy Corp., W. F. Skinner, plans erecting plant to manufacture other toys, plans expanding plant, Ponce de Leon Blvd.

La., Davenport—General Contracting—Cochran-Tefet, Inc., capital \$25,000, chartered; Emmett Cochran, 329 Olive St.

La., Haynesville—F. M. Graves, Editor, Little River News, Ashdown, Ark., acquired Haynesville News.

La., Lafayette—Lafayette Steam Laundry, Inc., D. D. Blue, Pres., plans laundry plant; fireproof, brick, steel, stucco; install modern motor driven machinery. 1-16

La., New Orleans—Dorsey Valetaria Laundry, Inc., capital \$50,000, chartered, John V. Harris, 615 Girod St.

La., Ruston—North Louisiana Dairy Products Co., Inc., let contract to C. E. Andrews, Ruston, at \$37,840, for dairy plant; Douthitt Engineering Co., Engr., 100 W. Monroe St., Chicago, Ill. 1-23

Mo., Ferguson—Universal Match Corp., A. H. Rosenberg, Pres., erect plant addition to manufacture safety book matches; 53x400 ft., rein. conc., 1 and 2 story, conc. slab roof; building, \$75,000; equipment, \$100,000. 1-23

Mo., Kansas City—Kenneth Smith acquired site, Main St., north of 29th St. intersection, for golf club plant.

Mo., Kansas City—Ricard Mfg. Co., capital \$25,000, incorporated; Rufus McCormick, 3308 Bales St., plumbing supplies, etc.

Mo., Springfield—F. B. Smith Laundry Co., A. C. Dally, 512 Boonville St., completing plans for \$15,000 laundry addition; 1 and 2 story, brick; W. W. Johnson, Archt., 301½ College St.

Mo., St. Louis—American School of Welding, Inc., 3031-33 Locust Blvd., capital \$50,000, chartered; W. D. Patterson.

Mo., St. Louis—Cox & Gordon, Inc., capital \$25,000, chartered; Emil Moch, 1848a Russell St.; meat packing, etc.

Mo., St. Louis—Unique Press, Inc., capital \$25,000, chartered; Louis H. Schneider, 807 N. Eighth St.; printing, publishing, etc.

N. C., Charlotte—Grinnell Co., Inc., North Station, Providence, R. I., plans \$200,000 plant, W. Morehead St., to manufacture automatic sprinklers.

N. C., Marion—Harry D. Crawford, Cleveland, Ohio, plans plant to manufacture new type of fuel from sawdust, old paper and coal dust, finished product being in brick form, called Fulettes.

Okla., Oklahoma City—Oklahoma Glove Co., capital \$100,000, incorporated; George H. Brodt, V.-Pres. and Gen. Mgr., Wells Roberts Hotel; negotiating for plant site. 1-16

Tex., Beaumont—Coale Roofing & Distributing Co., recently organized subsidiary of Coale Lumber Co., Park and Austin Sts., establish roofing plant.

Tex., Center—Tom E. Foster, owner and publisher of Center Daily, acquired Champion, weekly paper.

Tex., Corpus Christi—Texas Laundry, capital \$20,000, incorporated; D. E. Jackson, 1430 13th St.

Tex., Dallas—Stahlmann Honey Co., Inc., capital \$30,000, chartered; J. E. Pratt, 5107 Lindsley St.

Tex., Dallas—Oak Cliff Baking Co., incorporated; J. W. Rodgers, Republic Bank Bldg.

Tex., Dallas—Dallas Electric Supply Co., capital \$25,000, incorporated; H. B. Green, 412 Centre St.

Tex., Fort Worth—Dulaney Building Co., capital \$200,000, incorporated; R. O. Dulaney, Petroleum Bldg.

Tex., Goose Creek—San Jacinto Creamery Dairy, capital \$12,000, incorporated; R. B. Warne, William Holotik.

Tex., Cuero—Swift & Co., U. S. Stock Yards, Chicago, Ill., establish branch plant; 40x50 ft., 2 story and basement; provide cold-storage facilities; to be used for distributing products in this territory.

Tex., Hico—Bell Ice & Dairy Products Co., capital \$50,000, incorporated; Joe T. Boaner, F. L. Denison.

Tex., Houston—Dixie Tailor Supply Co., capital \$30,000, incorporated; Dave Grossberg, 2607 St. Emanuel St.

Tex., New Gulf—J. G. White Engineering Corp., Gen. Contr., 43 Ex. Pl., N. Y., advises regarding addition to plant of Texas Gulf Sulphur Co., 41 E. 42nd St., New York, will install 5 additional 1500-h. p. boilers in existing boiler house, 1 330 ft. high x 18 ft. diam. stack (radial brick), install 2 additional 70,000-gal. per hour low pressure water treating tanks with filters and chemical feeding equipment, 2 additional high pressure mine water heater equipments, necessary pumps and additions of 3 bays to chemical treating building; all work, except erecting stack, to be done by J. G. White Engineering Corp.; following have sub-contracts: Stack, Alphons Custodis Chimney Construction Co., 95 Nassau St.; boilers, 5, Stirling type, Babcock & Wilcox Co., 85 Liberty St.; forced draft fans, Green Fuel Economizer Co., 90 West St.; water treating plant, and mine water heaters, Cochran Sales Co., Inc., 50 Church St.; soot blowers, Diamond Power Specialty Corp., 12 E. 41st St.; pumps, A. S. Cameron Steam Pump Works, 11 Broadway; boiler meters, Bailey Meter Co., 50 Church St.; boiler settings, Bigelow-Liptak Corp., 101 Park Ave.; boiler breeching and air ducts, Connery & Co., 501 5th Ave.; pump and fan drive turbines, General Electric Co., all New York; fuel burners, Forney Combustion Engineering Co., Dallas, Tex.; boiler struc. steel, Ingalls Iron Works Co., 720 4th Ave., S., Birmingham, Ala.; boiler casings, platforms and gratings, Houston Structural Steel Co., 3910 Washington St., Houston, Tex.; chemical building extension struc. steel, Ingalls Iron Works Co. 1-16

Tex., Plainview—Traffic Signal—See Roads, Streets, Paving.

Tex., Richardson—Harben-Spotts Co., Sam P. Harben, Pres. and Mgr., Richardson, and Southwest Life Bldg., Dallas, receiving bids for printing and publishing plant, building, \$3,000, equipment, \$15,000; 35x40, brick, tile, conc., tin roof. (See Dallas, 1-16).

Tex., San Antonio—Building—Walsh-Burney-Key, Inc., capital \$12,000, chartered; E. G. Walsh, 123 Terrell Road.

Tex., Tyler—Sledge Mfg. Co., clothing manufacturer, enlarging plant; increase employees, 135 to 200; add several new lines of products.

Va., Damascus—American Cyanamid Co., 535 Fifth Ave., New York, acquired Beaver Chemical Co.

Va., Norfolk—Construction, etc.—R. D. Duell & Co., Inc., capital \$25,000, chartered; R. D. Duell, 629 Botetourt St.

W. Va., Wellsburg—Harvey Paper Mills Co., H. M. Dickinson, Mgr., subsidiary of Pillsbury Flour Co., Minneapolis, Minn., let contract to Austin Co., 16112 Euclid Ave., Cleveland, Ohio, for \$220,000 paper bag plant; 94x240 ft., conc., steel, brick; produce 3,000,000 bags monthly; broke ground, to be complete within 40 days. 10-31

Motor Bus Lines and Terminals

La., Monroe—Clark's Bus Line, Monroe applied to Louisiana Public Service Comm., Baton Rouge for permission to operate passenger bus line connecting Monroe, Lamkin, Fowler, Sterlington, Perryville and Bastrop.

N. C., Lexington—C. H. Timberlake authorized by City to operate bus line between Erlanger village on north and Dacotah village on south.

Tenn., Nashville—Service Lines, Inc., chartered; H. P. Vincent, 1501 Cedar Lane.

Texas—Railroad Comm., Austin, authorized C. M. Snelson, 1017 Barclay St., Fort Worth, to operate Class A motor freight truck lines between Fort Worth and Dallas; L. F. De Armond, Spearman, Gruver to Amarillo via Morse and Groom.

Tex., Dallas—Sproles Motor Freight Lines, Ed Sproles, 109 N. Houston St., acquired Union Transfer & Motor Freight Lines and Red Ball Motor Freight Lines, 700 Commerce St., adding over 900 mi. to system, opening up new direct freight service south from Dallas and Fort Worth.

Railways

Tenn., Nashville—Nashville, Chattanooga & St. Louis Ry., J. L. Woods, Pur. Agt., ordered 5 locomotives, of Dixie type, weighing 389,000 lb. each, especially designed for passenger and fast freight service, from American Locomotive Co., Schenectady, N. Y., for delivery in March, involving approx. \$500,000; to operate between Nashville, and Atlanta, Ga.

Tex., Beaumont—Sabine Basin Ry. Co., backed by Missouri Pacific Lines, L. W. Baldwin, Pres., St. Louis, Mo., and Santa Fe System, W. B. Storey, Pres., Chicago, organized with \$250,000 capital to operate line between Port Arthur and Beaumont, 20 mi.; H. R. Safford, V.-Pres., Missouri Pacific R. Co., Houston, president; negotiations under way for acquiring Eastern Texas Electric Co. electric line between Beaumont and Port Arthur.

Va., Richmond—Chesapeake & Ohio Lines, J. J. Bernet, Pres., expend \$42,000,000 for additions and betterments during 1930, exclusive of previously announced budgets totaling \$42,500,000; for Chesapeake & Ohio Ry. Co., proper budget provides \$27,500,000, including approx. \$5,000,000 carried over from 1929; Hocking Valley Ry. Co. expend \$7,000,000, including \$4,000,000, on carry overs; Pere Marquette Ry. Co. budget provides for \$8,000,000, including \$2,000,000 on carry overs; program of Chesapeake & Ohio Ry. Co. proper calls for work on all parts of system; tunnels will be enlarged, new tracks laid, passing tracks lengthened, shops expanded and bridges rebuilt and strengthened; at Newport News, Va., on Hampton Roads erect new low level coal pier, costing \$1,600,000, doubling company's coal delivery capacity, and additional \$1,500,000 to be expended for new merchandise pier at that point; new passenger station and car parking tracks, White Sulphur Springs, Va., \$160,000; office building, Russell, Ky., \$140,000; expend over \$3,700,000 for increasing main line clearances by enlarging several existing tunnels; improve facilities on all parts of Hocking Valley line.

Va., Richmond—Chesapeake & Ohio Ry. Co., H. C. Pearce, Director of Purchases and Stores, reported, placed orders for 40 engines and 15 tenders from Lima Locomotive Works, Lima, Ohio; Hocking Valley Ry. Co., and Pere Marquette Ry. Co., H. C. Pearce, Cleveland, Ohio, Director of Purchases and Stores for both, reported, ordered 80 engines and 40 tenders from American Locomotive Co., 30 Church St., New York. 1-2

W. Va., Newhall—Norfolk & Western Ry. Co., W. P. Wiltsee, Ch. Engr., Roanoke, Va., plans calling for bids about Feb. 1 for extension in McDowell County, W. Va., and Tazewell County, Va. 1-23

Railway Shops and Terminals

Ky., Grayson—East Kentucky Southern Ry. Co., W. I. Webb, Mgr., erect shops; 50x65 ft., frame with metal siding, conc. floor, metal roof; install lathes, planers, electric welder and other machine tools; Geo. Kitchen, Carpenter Foreman, Archt. See Want Section—Machinery and Supplies.

Roads, Streets and Paving

In connection with LAND DEVELOPMENT large sums are expended for roads, streets, paving and sidewalks. Details will be found under that classification.

Proposed Construction

Ala., Birmingham—City Comm., plans paying Eighteenth St. South, or Fayette Ave., from end of present paving in West End to new bridge over Valley Creek, to connect with other paving, estimated cost \$18,300; A. J. Hawkins, City Engr.

Ala., Montgomery—City, W. A. Gunter, Mayor, considering paving Florida, South Court St.; Capital Parkway; lay sidewalks on Madison Ave.; J. W. Garrett, City Engr.

Ala., Wetlowee—State Highway Comm., Montgomery, receiving bids to resurface State Highway No. 1, Roanoke to Wetlowee, Randolph County; R. D. Jourdan, State Highway Engr.

Ark., Forrest City—City plans 1 mi. paving, Jackson St., over which Highway No. 70 is routed through city; sold bonds.

Ark., Jonesboro—Comms. of Street Improvement Dist. No. 34, H. Pewitt, plan receiving bids to grade, drain, curb, gutter

and pave with conc. 8 streets and avenues, including Church St., Strawn, Steel, College Ave.; Guy W. Cobb, Engr., American Bank Bldg.

Ark., Magnolia—City completed plans to pave public square. North and South Jefferson and Calhoun Sts. in business sections, and West North St.

Florida—State Road Dept., Tallahassee, considering improving 2 roads: State Road No. 44, from Mims, Brevard County, to Sanford, Seminole County, across corner of Volusia County; complete new route of Cheney Highway from Indian City, Brevard County, west toward Orlando; B. M. Duncan, State Highway Engr.

Fla., Clearwater—Pinellas County Commrs., K. B. O'Quinn, Clk., receive bids Feb. 4 to treat 15 asphalt block and bridge surface, bit. macad. penetration and bit. surface treatment roads with slag, granite or Florida crushed stone; 306,654 yd.; 64,421 gal. of oil asphalt; C. E. Bendleson, County Engr.

Fla., Tampa—Hillsborough County Commrs., considering widening present highway 66 ft. between Plant City and Polk County line, for new State Road No. 17, to connect Tampa with Lakeland, Auburndale, Lake Alfred and Haines City; conc. pavement.

Louisiana—Louisiana Highway Comm., Baton Rouge, receives bids Feb. 25 for 2 roads: Bossier Parish—6.7 mi. conc., Niock to Atkins; Vernon Parish—5 mi. conc., Leesville to Annacoco; probably receive bids Feb. 25 for 2 roads: Avoyelles and Rapides Parishes—10 mi. grading, draining, between Cedar Point and Holloway; Sabine Parish—7.9 mi. gravel surface, between Many and Texas line; H. B. Henderlite, State Highway Engr.

Louisiana—Louisiana Highway Comm., Baton Rouge, received low bids for 2 roads: Webster and Bienville Parishes—14 mi. conc., Minden to Gibsland, J. B. McCravy Co., Citizens & Southern Bank Bldg., Atlanta, Ga., \$356,711; Lincoln Parish—7.7 mi. conc., Ruston to Simsboro, Forcum-James & Co., Dyersburg, Tenn., \$176,124; subject to approval of State Bd. of Liquidation. 1-2

La., Crowley—City, Gordon Brunson, Mayor, plans shelling Avenue H, Sixth St. to Northern Ave.

La., Lake Charles—City, J. Edgar Johnson, Commr. of Streets and Parks, plans receiving bids soon, for 1 mi. street paving; T. H. Mandell, Engr. 1-23

La., Natchitoches—Louisiana Highway Comm., Baton Rouge, receives bids Feb. 25 for 6 mi. 18-ft. Luella-Kadesh Highway, Route 1, Natchitoches and Winn Parishes; H. B. Henderlite, State Highway Engr.

Maryland—State Roads Comm., Baltimore, receives bids Feb. 4 for 2 roads and bridge: Anne Arundel County—19 mi. conc., State Highway, on Revell St., West Annapolis, from Taylor to Severn Ave.; Cont. AA-78; Harford County—46 mi. conc., State Highway, with 55-ft. conc. arch bridge over Winter's Run, on Belair road at Lake Fanny; Cont. H-68; G. Clinton Uhl, Chmn.

Miss., Aberdeen—City, Mayor and Bd. of Aldermen, R. C. Maynard, City Clk., receive bids Feb. 20 for grading, 425 lin. ft. 6-in. conc. paving, 52 ft. wide, 850 lin. ft. curb and gutter combined and grading, Washington St.

Miss., Clarksdale—City, R. E. Stratton, Jr., Clk., receives bids Feb. 4 for 1000 lin. ft. compined curb and gutter, 18,000 sq. ft. conc. walk, 800 sq. ft. driveways, 4 inlets; W. S. Bobo, City Engr.

Miss., Poplarville—Pearl River County Bd. of Suprvs., H. K. Rouse, Clk., receives bids Feb. 3 for about 7 mi. gravel, Columbia-Gainesville public road.

Mo., Boone Terre—City, E. H. Matkin, Mayor, contemplates 1/2 mi. conc. paving, from city to Highway No. 61; C. T. Malugen, Clk.

Mo., Jefferson City—State Highway Dept., plans letting contract in Feb. for about 14 mi. conc., Highway No. 63, from Jefferson City to Ashland.

Mo., Linn—State Highway Dept., Jefferson City, reported, plans paving with conc. 19 mi. Highway No. 63, across Osage County, and erecting bridge over Maries River near Westphalia.

Mo., St. Louis—City, Bd. of Public Service, plans expending \$226,435, during 1930, to sheet asphalt surface 7 streets, including Utah, Seventeenth St., Evans, St. Ferdinand Ave.

Mo., St. Louis—City, Bd. of Public Service, E. R. Kinsey, Pres., receives bids Feb. 11 for granite curb, conc. gutters asphalt paving, conc. course foundation on 3 streets

and avenues, including January, Wanda Ave.; Walsh, Alexander, Dolman St.; W. W. Horner, Engr.

Mo., West Plains—City, J. P. Harlin, Mayor, may receive bids in spring for \$27,000 street improvement; Russell & Axon, Conslt. Engrs., 6200 Easton Ave., St. Louis; plans prepared.

N. C., High Point—City Council considering extending East Russell St. to connect with Brentwood Ave.

Oklahoma—State Highway Comm., Oklahoma City, received low bids for road and 3 bridges: Kingfisher County—9.16 mi. grading, draining, U. S. Highway No. 81, Kingfisher to Canadian County line, J. E. Smith & Son, Moore, \$38,469; Logan County—bridge on State Highway No. 33, west of Guthrie, Rimbey Co., Oklahoma City, \$15,771; Pushmataha County—bridge on U. S. Highway No. 271, Haynes and Bruce, Tuskahoma, \$15,983; Washita County—bridge over Washita River, State Highway No. 31, east of Cordell, Grant Williams, 425 1/2 Main St., Oklahoma City, \$98,740; A. R. Losh, State Highway Engr. 1-16

Okla., Oklahoma City—City, E. M. Fry, Mgr., considering paving Twenty-Seventh St., Lee to Shartel Ave.; Forty-ninth St., Classen Blvd. to Western Ave.; Phillips Ave., Thirteenth to Fourteenth Ave.; Grand Blvd., Walker to Shartel Ave.; Eighteenth St., Homa to Rhode Island Ave.; Homa Ave., Sixteenth to Eighteenth St.; plans widening Hudson Ave., Tenth to Thirteenth St., and East Twenty-ninth St., Santa Fe right of way to High Ave.; W. W. Small, City Engr.

Okla., Pawhuska—State Highway Comm., Oklahoma City, plans improving State Highway No. 25 between Pawhuska, Osage County, and Bartlesville.

Okla., Pawnee—State Highway Comm., Oklahoma City, plans 10 mi. additional conc. Highway No. 64, in spring, between Pawnee and Cleveland, Pawnee County.

S. C., Columbia—City, L. B. Owens, Mayor, considering sidewalks on several blocks, Cypress St.; E. W. Tomlinson, City Engr.

S. C., Columbia—Richland County Commrs., Andrew Patterson, Jr., Supvr., receive bids Feb. 11 for rigid pavement or surface treating on 3 roads, and for 1 bridge: 5 mi. Old Winnsboro; 3 mi. Asylum road; 2 mi. Leesburg road; conc. bridge over Crane Creek, on Old Winnsboro road; R. M. Porter and Jas. C. Covington, Engrs.

S. C., Greenville—State Highway Comm., Columbia, plans letting contract in Feb. for standard paving on Greer Highway, Greenville County, between Travelers Rest and Marietta.

Texas—State Highway Comm., Austin, probably let contract in Feb. for improving Highway No. 6 from Bryan, Brazos County to Benchesley, Robertson County; making survey to hard surface Highway No. 21; Gibb Gilchrist, State Highway Engr.

Tex., Anelton—Brazoria County, Scott Gaines, Judge, plans 8.442 mi. grading, draining, Highway No. 36, West Columbia to Brazoria; J. R. Eeds, Res. Engr., West Columbia.

Tex., Anson—Jones County, Owen Thomas, Judge, plans 5.328 mi. grading, draining, Highway No. 4, Hamlin to Stonewall County line; J. W. Puckett, Res. Engr., Stamford.

Tex., Beeville—Bee County, R. J. Beasley, Judge, plans 8.105 mi. grading, draining, Highway No. 12, San Patricio County line to Skidmore; B. F. Collins, Res. Engr., Mathis.

Tex., Boerne—Kendall County plans expending \$171,000 to improve county roads. See Financial News Columnne.

Tex., Brownsville—State Highway Comm., Austin, plans paving 5 mi. Point Isabel road from San Benito, Cameron County, to Point Isabel; Gibb Gilchrist, State Highway Engr.

Tex., Brownwood—Brown County, E. M. Davis, Judge, plans 14.707 mi. grading, draining, Highway No. 129, from Sta. 538 plus 44.6 to Eastland County line; Leo Ehlinger, Res. Engr.

Tex., Burnet—Burnet County, O. B. Zimmermann, Judge, plans .965 mi. grading, draining, Highway No. 108, from Sta. 328 plus 31.1 north to Marble Falls; J. Bouldin Crofton, Res. Engr., Marble Falls.

Tex., Corsicana—Navarro County, Clay Nash, Judge, plans 7.007 mi. rein. conc. Highway No. 32, Freestone County line to Richland, estimated cost \$175,000; J. W. Alger, Res. Engr.

Tex., Dallas—City, J. Waddy Tate, Mayor, preparing plans to widen Beckley Ave., Oak Cliff, near Ninth St.; John M. Young, City Engr.

Tex., Fort Worth—City, O. E. Carr, Mgr., considering widening Boaz St. between Rio

Grande Ave. and East Front St.; D. L. Lewis, City Engr.

Tex., Fort Worth—Tarrant County, S. D. Shannon, Judge, plans 2.864 mi. grading, draining, Highway No. 121, from point east of Grapevine to Dallas County line; M. C. Welborn, Res. Engr.

Tex., Kingsville—Kleberg County Commrs., Court plans expending \$150,000 toward highway from Kingsville to Kleberg and Jim Wells County lines; limestone and topped. See Financial News Columnns.

Tex., Hallettsville—City, W. D. Timm, Mayor, receives bids March 5 for 4800 cu. yd. excavation, 4800 lin. ft. curbs and gutters, 18,100 sq. yd. 7-in. rein. conc. paving; 8-in. rein. Vibrolithic conc., 2-in. natural limestone rock asphalt; hot mix on 6-in. conc. base; storm drains, etc.; Terrell Bartlett Engineers, Inc., 1412 Smith-Young Tower Bldg., San Antonio.

Tex., Houston—Harris County, Norman Atkinson, County Judge, contemplates paving Alameda road from Houston city limits to Pierce Junction; A. J. Wise, Res. Engr.

Tex., Llano—Llano County, W. E. Moore, Judge, plans 1.314 mi. grading, draining, Highway No. 124, Llano County line to Gillespie County line, estimated cost \$28,000; L. N. Gray, Res. Engr.

Tex., Memphis—Hasle Engineering Co., Inc., Dallas, awarded contract as engineers for \$1,200,000 program to conc. surface highways in Hall County near Memphis.

Tex., Orange—State Highway Comm., Austin, making survey for gulf coast terminal of Highway No. 87, entering Orange County from east Texas and continuing to Port Arthur; tentative plans provide for highway route to intersect Orange and Orangefield highway at end of conc. west of West Orange, and continue to dump, extending to wood trestle leading to Neches River ferry; Gibb Gilchrist, State Highway Engr.

Tex., Plainview—City plans street paving in residential section, improve park system and install traffic signal system.

Tex., Plainview—Hale County, E. C. Abernathy, Judge, plans 7.528 mi. rein. conc., Highway No. 28, Plainview to Floyd County line, estimated cost \$185,000; 22.139 mi. rein. conc., Highway No. 28, Plainview to Lamb County line, estimated cost \$540,000; H. R. Anderson, Res. Engr.

Tex., Rankin—Upton County, C. H. Latson, Judge, plans 18.040 mi. grading, draining, Highway No. 99, McCamey to Rankin; P. H. Caldwell, Res. Engr., Fort Stockton.

Tex., Seymour—Baylor County, J. T. St. Clair, Judge, plans 19.638 mi. crusher run broken stone base, 11 mi. 2 1/2-in. bit. macad. and 9.369 mi. conc. pavement, Highway No. 24, Seymour to Archer County line; estimated cost \$375,000; H. S. Kerr, Res. Engr.

Tex., Wichita Falls—State Highway Comm., Austin, considering widening 41 mi. Wichita County highways, 18 to 30 ft. from Wichita Falls to Burkburnett Red River Bridge, and from Wichita Falls-Vernon Highway to Wilbarger County line; estimated cost \$656,000.

Virginia—State Highway Comm., Richmond, receives bids Feb. 11 for 4 roads and 3 bridges: Culpeper County—4.5 mi. macad., Route 21, from Rappahannock County line, 47,268 sq. yd. macad., 97,050 cu. yd. excavation, 25,587 lb. rein. steel; Botetourt County—7.5 mi. macad., Route 17 from point north of Gals, 79,890 sq. yd. macad., 119,804 cu. yd. excavation, 22,592 lb. rein. steel; Pittsylvania County—8.2 mi. rock asphalt, bit. macad. or similar wearing courses, Route 14, from point north of Danville, 64,780 sq. yd. paving, 34,321 cu. yd. excavation; Clarke County—4.3 mi. macad., Route 54, from Loudoun County line, 459,02 sq. yd. macad., 64,144 cu. yd. excavation, 15,385 lb. rein. steel, also bridge over Simpson Creek, 8,985 lb. rein. steel; Lunenburg County—269-ft. bridge, Route 44, over North Meherrin River, at Lunenburg County line, rein. conc. beams and steel spans, 87,350 lb. rein. steel, 77,925 lb. struct. steel; Norfolk County—rebuild bridge fender over South Elizabeth, Route 50A, Norfolk, 20,000 F. B. M. Creosoted lumber, 6,500 lin. ft. piles; C. S. Mullen, Ch. Engr.

Va., Richmond—City Council Finance Committee considering appropriating funds to widen Cowardin Ave., Hull St. to Semmes Ave.; J. Fulmer Bright, Mayor.

W. Va., Middlebourne—Tyler County, Middlebourne and Ellsworth Dist., plan expending \$98,000 for 8 roads. See Financial News Columnns. 10-3

Contracts Awarded

Ala., Wedowee—State Highway Comm., Montgomery, let contract to Nixon & Phil-

Ips, 917 Sixth Ave., N., Birmingham, for state highway from Wedowee, Randolph County, to Tallapoosa River toward Lineville.

Arkansas—State Highway Comm., Little Rock, let contracts for 5 roads and 6 bridges, totaling \$630,308: Ashley County—6 mi. grading, draining, State Highway No. 2, Cross-West road, Alexandria Contracting Co., Alexandria, La., \$31,397; Calhoun County—10 mi. grading, draining, State Highway No. 115, Hampton-Callon road, Ayres & Graves, Hope, \$49,042; Union County—7 mi. grading, draining, State Highway No. 15, Three Creeks-Louisiana State line road, E. A. Enloe, 554 Gladstone Bldg., Shreveport, La., \$42,934; Searcy County—6 mi. gravel surface, State Highway No. 65, Marshall-Leslie road, George Millard, New London, Wis., \$20,016; St. Francis County—3 mi. grading, draining, State Highway No. 70, Forrest City-West Memphis road, J. G. Newkirk, Plainview, Ark., \$52,601; Hempstead County—712 lin. ft. rein. conc. deck girder bridges on Hope-Fulton road, State Highway No. 67, Reynolds & Sutton, Nashville, Ark., \$53,898; Washington County—106 lin. ft. struct. steel and rein. conc. bridges and 789 lin. ft. earth embankment approaches thereto, Fayetteville-Winslow road, State Highway No. 71, Maxwell Construction Co., Columbus, Kansas, \$116,136.

In Ouachita County—714 lin. ft. rein. conc. and struct. steel bridges, 174 lin. ft. earth embankment approaches thereto, Smackover-Camden road, State Highway No. 167, Richardson-Ayres, Hope, \$62,025; Yell County—207 lin. ft. rein. conc. and struct. steel bridge over Petit Jean River, Danville-West road, State Highway No. 10, Richardson-Ayres, \$20,833; Craighead and Poinsett Counties—654 lin. ft. treated timber pile bent bridges, conc. floors or timber floors, with asphalt plank wearing surface, Jonesboro-Craighead road, State Highway No. 39, W. L. Sharp, 3532 Midland St., Memphis, Tenn., \$28,986; St. Francis County—1579 lin. ft. rein. conc. deck girder bridges, 288 lin. ft. earth embankment approaches thereto, Madison-Crittenden County line road, State Highway No. 70, Peterson & Earnhart, Bell Bldg., Montgomery, Ala., \$152,432; C. S. Christian, State Highway Engr.

Fla., Miami Beach—W. T. Price, Inc., S. W. Twenty-seventh Ave., Coconut Grove, Miami, reported, has contract, at about \$28,200, for roads on Island north of Normandy Beach, Miami Beach; Watson & Garriss, Engrs., Hill Bldg., Miami.

Ga., Fort Oglethorpe, Rossville—Constructing Quartermaster, Fort Oglethorpe, let contract to Murray Construction Co., 508 Union Ave., Knoxville, Tenn., \$72,123, to pave Dry Valley road. 1-16

Louisiana—Louisiana Highway Comm., Baton Rouge, let contracts for 4 roads and 24 bridges: West Feliciana Parish—9.886 mi. gravel surface, Jackson to Wakefield, W. T. Gray, Homer, \$14,770; Vermillion Parish—8.197 mi. grading, draining, gravel surface, Milton to Leroy, Perry J. Burke, New Iberia, \$21,378; Allen Parish—2.878 mi. grading, gravel, Oberlin-DeRidder Highway, Alexandria Contracting Co., Alexandria, \$17,952; Calcasieu Parish—3.333 mi. gravel surface, DeQuincy to Texas line, W. T. Gray, \$5,496; Grant Parish—bridge over Rocky Bayou and Bayou Degage, Colfax-Aloha Highway, Alexandria Contracting Co., \$37,678, subject to approval of State Bd. of Liquidation; Sabine Parish—8 bridges on Many-Martville Highway, J. A. Hancey, Mittie, \$13, 167; Blenville Parish—8 bridges on Bryceand-Salles Highway, Newsom Brothers, Columbia, Miss., \$9,984; 4 bridges on Bryceand-Salles Highway Newsom Brothers, \$5,293; Lafourche and St. James Parishes—2 bridges on Thibodaux-St. Patrick Highway, Newsom Brothers, \$16,425. 1-9

La., Marksville—Louisiana Highway Comm., Baton Rouge, let contract to Barber Brothers Co., Kosciusko, Miss., \$179,240 for 6.7 mi. conc. Mansura to Marksville; to Austin Bridge Co., 1813 Clarence St., Dallas, Tex., \$179,240, for bridge across Sabine River, between Beauregard Parish, La. and Newton County, Tex. 12-5-1929, 1-2-1930

La., Monroe—City, Arnold Bernstein, Mayor, let contract to M. Hyman, 305 Park Ave., Monroe, to pave South First and Jackson Sts., Lee Ave. with sheet asphalt, conc. base; to O. C. and M. L. Contes, Monroe, to pave alley with rein. conc., Third to Fourth; W. I. Neel, City Engr. 1-2

Missouri—State Highway Dept., Jefferson City, let contracts for 4 roads: Newton County—209 mi. 18-ft. conc., M. E. Gillioz, Monett; Knox County—4.583 and 4.403 mi. 18-ft. gravel, Harry Tidd, Hutchinson, Kansas; Wright County—2.688 mi. 18-ft. gravel, R. H. Sharp, Reeds Spring, Mo.; T. H. Cutler, State Highway Engr. 1-2

N. C., Albemarle—William F. Bowe, Jr., has contract to pave Railroad St., Mailn to Sibley St.

Texas—State Highway Comm., Austin, let contracts for 2 roads: Jones and Taylor Counties—22 mi. grading, draining, conc., Highway No. 4, Abilene to Anson, L. E. Whitham & Co., San Angelo, \$629,358; large drainage structures to P. W. Bertram, San Angelo, \$41,190; Dallas County—9 mi. conc. on gravel base course, Highway No. 114, from near Maple Ave. to Tarrant County line, C. A. and J. W. Vilbig, Jr., 817 Bourbon St., Dallas, \$184,561. 1-9

Tex., Corsicana—State Highway Comm., Austin, let contract to John T. Leslie, Bailey, \$36,697, for 1.949 mi. grading, draining Highway No. 139 from Corsicana southeast; J. W. Alger, Res. Engr. 1-9

Tex., Galveston—Galveston County, E. B. Holman, County Judge, let contract to Haralson & Cunningham, 1st Natl. Bk. Bldg., Houston, \$11,445, for road across government reservation, to connect Fort Point landing of Bolivar Ferry with east end of seawall; C. C. Washington, County Engr. 12-12

Tex., Houston—City, W. E. Monteith, Mayor, let contract to National Paving Co., 112 Buffalo St., \$135,907, to pave Harrisburg Blvd. 52 ft. wide, Sixty-seventh St. to Brays Bayou; 60 ft. wide, Sixty-seventh St. to H. B. & T. tracks; pave Dart St. 45 ft. wide, Houston Ave. to Kessler; H. L. Shaw, City Engr. 1-16

Sewer Construction

Sewer construction in LAND DEVELOPMENT projects involves the expenditure of large sums of money. Under that classification details of these improvements are reported.

Ala., Montgomery—City Comm., receiving bids for sanitary and storm sewers north of Roanoke St.

Ky., Louisville—City plans Goss Ave. sewer; W. M. Kays, 400 M. E. Taylor Bldg., Technical Engr.

Ky., Louisville—Comms. of Sewerage, Woolsey T. Cate, Ch. Engr., receive bids Feb. 1 for Western Parkway trunk sewer. 12-12

La., Gretna—City, Chas. F. Gelbke, Mayor, bids March 5 for sanitary sewers. See Want Section—Bids Asked.

Md., Annapolis—Anne Arundel County Sanitary Comsn., extend water and sewerage facilities; Public Service Comn., Baltimore, approved issue of \$86,000 bonds.

Md., Baltimore—N. Martell, 440 Vesta Ave., low bidder for Storm Water Contr. 141; M. & J. B. McHugh, 892 N. Market St., Philadelphia, Pa., for excavating trenches.

Md., Baltimore—Marino Contracting Co., 305 N. Exeter St., has contract at \$66,750, for storm drains, Storm Water Contr. 138. 12-19

Mo., Parma—See Water Works.

Mo., Springfield—City, C. A. Dickerson, Clk., construct disposal plant on Sac Creek; may vote on \$700,000 bonds.

Mo., Sullivan—City, N. W. Shaffer, Clk., reported, plans septic tank improvements.

Okla., Frederick—See Water Works.

Okla., Lawton—City votes March 18 on \$50,000 sewer bonds and widening Squaw Creek.

Okla., Purcell—City, reported, plans \$10,000 sewer improvements.

S. C., Greenville—City, L. B. Clardy, Chmn. Sewer Committee, plans extension of sewer system. 12-26

Tex., Big Spring—See Water Works.

Tex., El Paso—City, R. E. Thomason, Mayor, will probably call for bids in about a month for \$120,000 storm sewer work during 1930; 24-in. to 60 in. precast conc. pipe, segment block and mono. gunite pipe. See Want Section—Bids Asked.

Tex., Tyler—W. L. Carter, Tulsa, Okla., reported, has contract at \$180,000 for sewage disposal plant.

Tex., Waco—City, J. Rady, Engr., reported, soon take bids for sewerage extension; \$60,000 bonds available.

Street Railways

D. C., Washington—Washington Railway & Electric Co., expend \$20,000 altering building, 4½ and O St., S. W.

La., New Orleans—New Orleans Public Service Co., Public Service Bldg., plans enlarging car barns and shops.

Okla., Oklahoma City—Oklahoma Ry. Co., G. B. Treat, Ch. Engr., has authority for extension of Robinson Ave. line, 28th to 31st St., 1139 ft.; rein. conc. beam, 6x22 in. below ties, and under each rail; 6x8 in. x 7 ft. creosoted, red oak ties to be spaced 22 in. centers with 85 lb. ASCE rail and welded joints; paving to be 1, 2, 4 conc. from base of tie to top of rail; work by company's forces. 1-16

Telephone Systems

Alabama—Southern Bell Telephone & Telegraph Co., Atlanta, Ga., reported, expend over \$13,000,000 in Alabama in 1930, at rate of approx. \$1,084,000 monthly, including dial office at Shades Valley, building and central office equipment at Anniston, building and exchange equipment at Evergreen and repeater station for long distance service.

Mo., Marshall—Southwestern Bell Telephone Co., I. R. Timlin, Archt., Telephone Bldg., St. Louis, advises abandoned project of erecting telephone building here.

La., Shreveport—Edson Realty Co. let contract to K. C. Wilson, Slatery Bldg., for building, 614 Edwards St., at \$69,169; Western Union Telegraph Co., Lessee, New York; Tisdale, Stone & Pinson, Archts., Goodhue Bldg., Beaumont, Tex. 1-23

Mo., Kansas City—American Bridge Co., 71 Broadway, New York, has contract for 1350 tons steel for toll building of Southwestern Bell Telephone Co., E. T. Mahood, Engr.; Hoit, Price & Barnes, Archts.; I. R. Timlin, Assoc. Archt., both Telephone Bldg., St. Louis, Mo. 1-16

Mo., Springfield—Southwestern Bell Telephone Co., Telephone Building, St. Louis, expend approx. \$150,000 here in 1930, including 6 sections of new switchboard to be installed in exchange, 4 for long distance and 2 for additional local lines; switchboards with associated equipment, cost about \$50,000; \$100,000 for outside plant; lay new cable along W. College Street Rd.; no new buildings planned. 1-9

Okla., Guymon—Judge G. H. Lamar, Texhoma, O. S. Tyler, Guymon, and associates applied to Federal Radio Comn., Washington, for permission to construct broadcasting station of 100 watts.

S. C., Spartanburg—Virgil Evans authorized by Federal Radio Comn., Washington, to establish radio station, to be known as Voice of South Carolina; install 750-watt transmitters.

Tex., Harlingen—Postal Telegraph-Cable Co., New York, let contract to Blythe & Duerson for \$10,000 building.

W. Va., Charleston—Chesapeake & Potomac Telephone Co. of West Virginia, J. W. Latnam, Ch. Engr., advises plans for erecting telephone building considerably delayed and are in course of preparation and it will be some time before they are ready for bidders; Meador & Handloser, Archt., Payne Bldg., Charleston. 9-26

Textile Mills

Ala., Florence—Gardiner-Warring Co., Inc., reported, plans expansion; install machinery; build warehouse, enlarge main building; Florence Industrial Corp., will meet to endorse plans; manufacturers underwear.

Ga., Gainesville—Lonsdale Mill, 50 S. Main St., Providence, R. I., reported, plans early construction of mill for which site was acquired in 1929. 5-23-29

N. C., Burlington—Foster Knitting Co., reported, let contract to Robert Reiner, Inc., Weehawken, N. J., for Einsiedel-Reiner full fashioned hosiery machines.

N. C., Charlotte—Lakewood Vamp-Toe Silk Hosiery Mills, Inc., changed name from Fleetwood Silk Hosiery Mill.

N. C., Hickory—Ivey Weavers, Inc., reorganization of Ivey Mill Co.; G. H. Geitner, Pres.; manufacturers pongees, satens and twills.

N. C., Morganton—Morganton Full-Fashioned Hosiery Co., reported, plans steel and conc. addition to mill; install additional machines.

Tenn., Columbia—Cadet Knitting Co. plans installation of 60 additional full fashioned knitting machines.

Tenn., Trenton—W. A. Harder, Kinderhook, New York, will erect mill for Trenton Mills, Inc. 12-26

Texas—C. L. Emerson, V. P. & Ch. Engr., Robert & Co., Inc., Bona Allen Bldg., Atlanta, Ga., reported, considering various cities in South Texas for possible location of textile mill by New England mill owners; Victoria, Tex., seeking establishment of plant.

Va., Brookneal—Surewear Hosiery Mills, reported, rebuild burned mill.

Va., Hopewell—Stockholders of Tubize Artificial Silk Co. of America, Inc., 2 Park Ave., New York, will meet March 5 to ratify action Bd. of Directors for consolidation of Tubize Artificial Silk Co. of America and American Chatillon Corp., 393 Seventh Ave., New York, to be known as Tubize Chatillon Corp. 5-30

Water Works

Details of water works improvements in connection with the many LAND DEVELOPMENT operations will be found under that classification.

Ga., Tennessee—James R. Connelly, Box 636, Florence, S. C., has contract for additional pumping unit for water works.

La., Shreveport—City authorized purchase of 10 acres adjoining Cross Lake as site for addition to water works plant. 1-16

Md., Baltimore—The Mueller Co., Decatur, Ill., awarded contract at \$11,000 for brass service pipe fittings for Bureau of Water Supply.

Miss., West Point—See Electric Light and Power.

Mo., Parma—City, Jos McLaughlin, Mayor, reported, plans water works and sewers; may vote on bonds.

Mo., Sikeston — See Electric Light and Power.

Mo., Sweet Springs — City, reported, let contract for 75,000 gal. tank and 125 ft. tower, 44,251 ft. of 2 to 8-in. c. i. pipe line, 18,000 lb. castings, etc. to Markle Contracting Co., 413 City Bank Bldg., Kansas City. 10-3

N. C., Wilmington—City, B. H. Dewey, Clk., receives bids Feb. 4 for c. i. bell and spigot Class C pipe or bolted joint pipe. See Want Section—Bids Asked.

Okla., Cushing—City, G. Esty, Engr., plans \$15,000 rein. conc. roof for reservoir.

Okla., Frederick—City plans improvements to water and sewer system; \$40,000 bonds available. 9-26

Okla., Hobart—City plans issuing \$450,000 water works bonds. 10-10

Okla., Lawton—City, Todd Sanders, Clk., plans water works improvements, reconstructing filter plant at Lake Latonka, etc.; F. E. Lawrence, Engr.; votes March 18 on \$200,000 bonds.

Okla., Lindsay—City, R. I. Sawyer, Engr., reported, plans \$15,000 water main extensions.

Okla., Lone Wolf—City, F. Davis, Clk., reported, plans \$15,000 water supply system.

Okla., Purcell—City, reported, plans \$30,000 water works extension; V. V. Long & Co., Engrs., Colcord Bldg., Oklahoma City.

Okla., Terral—City, E. F. Rodgers, Clk., voted \$22,500 water bonds.

Okla., Waurika—Sherman Iron Works, 18 E. Main St., Oklahoma City, reported, has contract at \$48,000 for water supply, including wells, tank, pumps and pipe lines.

S. C., Springfield—James R. Connelly, Box 636, Florence, has contract for two 10-in. wells for water supply; J. S. Schofield Sons Co., Macon, Ga., for tank and tower; Central Foundry Co., 420 Lexington Ave., New York, for pipes; The Grinnell Co., Providence, R. I., for hydrants and valves; Ryan Engineering Co., Engrs., Arcade Bldg., Columbia, S. C. 1-23

Tex., Big Spring—City votes in Feb. on water and sewer bonds. 11-21

Tex., Fort Worth—Trinity Farms Construction Co., 2519 Oak Lawn Ave., Dallas, Uvalde Paving Co., Santa Fe Bldg., Dallas, and McKenzie Construction Co., Travis Bldg.,

San Antonio, on joint proposal awarded contract for construction of Eagle Mountain dams and Bridgeport dams for Tarrant County Water Control and Improvement Dist. No. 1 at total figure of \$3,758,216; Walter R. Bennett, Pres., Bd. of Directors of District; Hawley & Freese, Conslt. Engrs., 411 Capps Bldg., Fort Worth. 1-16

Tex., San Antonio—See Electric Light & Power.

Va., Williamsburg — Rockefeller Holding Corp., Dr. G. A. R. Goodwin, Local Repr. George Wythe House, plans improvement to water supply system; Metcalf & Eddy, Water & Sanitation Engrs., Statler Bldg., Boston, Mass.

W. Va., Bridgeport—Town Council votes Feb. 25 on \$15,000 water improvement bonds. 12-19

Woodworking Plants

Ky., Louisville—O. O. Byron & Co., 320 E. Burnett St., millwork stock manufacturer, increased capital to \$150,000 and changed name to Byron Sash & Door Co.

La., Alexandria—Roy O. Martin, Fenner St., hardwood sawmill operator, and Chamber of Commerce negotiating with Eastern firm for establishing \$500,000 furniture plant.

N. C., Asheboro—Cranford Furniture Co., Ed Cranford, erect \$150,000 plant to manufacture dining room furniture; motor driven machinery purchased.

Okla., Oklahoma City—Lorenz Wood Carving Co., K. W. Loring, Mgr., 47 E. 23d St., opens bids Mar. 1 for \$12,500 wood carving plant; 40x80 ft., 2 story, conc. blocks, conc. and hardwood floors, comp. roof; include 3 apartments on second floor; private plans. 11-28

FIRE DAMAGE

Ala., Anniston—Main floor of I. Silver & Bros. Co.'s store, 1006 Noble St.

Ala., Oneonta — Robinett Hotel; address The Management.

Ark., Berryville — North Arkansas Grain Mill, W. D. Wilson, Pres.

Ark., Greenwood — "No Whipping" High School; loss \$30,000. Address Bd. of Education.

Fla., Bartow—H. C. Conner & Son's packing plant; loss \$50,000.

Fla., Millville—Granmar School; loss \$50,000. Address Bay County Bd. of Public Instruction, Panama City.

Ga., Atlanta—Mill building of Atlanta Chemical Co., Inc., 800 N. Ashby St.; loss \$30,000.

Ga., Columbus — Jacobson Department Store, Charles Jacobson, Propr.

Ky., Grayson—Eastern Kentucky Southern Ry.'s shops; W. I. Webb, Gen. Mgr., Grayson.

Ky., Jackson — J. H. Johnson's general store; loss \$40,000.

Ky., McHenry—McHenry High School; loss \$35,000.

Ky., Princeton—Cummins Dry Goods Co.'s store on Main St.; loss \$20,000.

Ky., Salvisa—Graded School; loss \$50,000; address School Bd.

La., Ferriday—J. M. Jones Lumber Co.'s mill, office, retail yard, dry kilns and planing mill; loss, reported, approx. \$325,000.

La., Lake Charles—H. W. Miller's apartments, 426 Miller Ave.; loss \$10,000.

La., New Orleans — Two barns at Fair Grounds Racing Track.

Md., Baltimore—Abandoned plant, Washington Boulevard and Railroad Ave., of General Electric Co., Schenectady, N. Y.; furniture plant, 219 N. Sharp St., occupied by C. F. Meislahn & Co.

Md., Highland Beach—Hotel owned by Rubard Ware; Sarah Hall's bungalow; Dr. J. E. Washington's bungalow; loss \$25,000.

Md., Port Deposit—Branch plant of Victor Sparkler Co.; loss \$50,000.

Md., Salisbury — S. Franklyn Woodcock's residence.

Md., Towson—Wiltondale, residence of Mrs. Jessie H. Greenway, on York Rd. near Towson.

Miss., Abbeville—Abbeville High School; J. B. Hill, Supt. of Education, Oxford.

Miss., Biloxi—Woman's hospital, Confederate Home at Beauvoir, Elnathan Taritt, Supt.; loss \$15,000.

Miss., Coffeeville — Bailey Brothers, Inc., general store; loss \$60,000.

Miss., Indianola—Indianola Oil Mill, care J. H. Pettey, Greenwood; loss \$400,000.

Miss., Swiftown—Gin and seed house of Barron & Holland; loss \$25,000.

Mo., Caruthersville — Cunningham Bldg., owned by Frank Cunningham; loss \$50,000 to \$75,000.

Mo., Carthage—Jerry N. Taylor's building; loss \$50,000.

Mo., Chillicothe—F. W. Woolworth Co.'s store; Farmers and Merchants Bank; loss \$25,000.

Mo., Glasgow — Leob-Digges Mercantile Co.'s store; loss \$25,000.

Mo., Sedalia—Capitol Garage, 109 S. Grand Ave.; William Noland, Prop.

Mo., Tarkio—Main building of Tarkio College, Dr. J. A. Thompson, Pres.; loss \$125,000.

N. C., Charlotte—Plant of Southern Cotton Oil Co.; loss \$200,000.

N. C., Greensboro—W. P. Bowman's building on Greensboro-High Point road near Sedgfield; loss \$10,000.

N. C., Lumberton — Main building at Thompson Institute near Lumberton; loss \$15,000.

N. C., Monroe—J. R. Shute's building on E. Franklin St., occupied by Abe Joseph Department Store; loss \$20,000.

Okla., Cherokee—Eastman Clothing Co.'s building; Nozle's Cafe; Winchester Oil & Gas Co.'s building; Oklahoma Abstract Co.'s building; Cherokee Abstract Co.'s building; loss \$80,000.

Okla., Oklahoma City—Building occupied by A. & B. Spring Mfg. Co., Mrs. Ethel Benedict, Pres., 719 W. Main St.; Curtis Co., Inc., Clinton, Ia., owner.

Tenn., Forbus—Alvin Upchurch's residence and barn.

Tenn., Nashville—Building, 816 S. Fifth St., operated by Sanders Mfg. Co., W. J. Cummings, Mgr., operating woodworking plant; loss \$23,000; American Wood Works, Inc., owner.

Tenn., Paris—City Hall; loss \$15,000.

Tenn., Saint Andrews—Saint Andrews Preparatory School for Boys, F. G. Stevenson, Bus. Mgr.; loss \$25,000.

Tex., Baytown—Community hall of Humble Oil & Machinery Co., Humble Bldg., Houston; loss \$33,000.

Tex., Bogata—Bogata Hardware Co.'s store; loss \$10,000.

Tex., Electra—Wayne Hammond's casing-head gasoline plant on McCarty lease; loss \$20,000.

Tex., Gunter—City Meat Market; Campbell Dry Goods Store; Orange Cafe; Gunter Drug Store; B. E. Sharpe's insurance office; loss \$60,000.

Tex., Houston—O. M. Coe's residence, Avenue E, Foster Place.

Tex., Mexia—First Baptist Church, Rev. J. H. Cozard, Pastor; loss \$90,000.

Tex., Waxahachie—Public school at Oak, 9 mi. from Waxahachie; A. Dupree Davis, Ellis County Supt. of Education.

Va., Boydton—H. M. Zimmerman's livery stable and storehouses on Madison St.; Mrs. S. O. Barnett's garage; H. T. Allgood's storehouse; loss \$12,000.

Va., Bristol — Tanneva Overall Factory's plant, Virginia Ave.; loss \$20,000.

Va., Norfolk—J. E. Etheridge Lumber Co.'s yard, Brambleton Ave.

Va., Paeonian Springs—Loudoun County Milling Co.'s elevator; loss \$12,000.

Va., South Washington—Armstrong Lumber Co.'s yards, including office and warehouse; loss \$10,000.

W. Va., Superior—Lake Superior Coal Co.'s store building, E. R. Jackson, Local Mgr.; loss \$50,000.

BUILDING NEWS

BUILDINGS PROPOSED

Association and Fraternal

D. C., Washington—Masonic Temple Building Comsn., Gratz Duncan, Chmn., 13th St. and New York Ave., N. W., considering erecting temple to cost about \$2,000,000; Corbett, Harris & McMurray, Archts., 130 W. 42nd St., New York; Frank B. Pierson, Asso. Archt., Hill Bldg., Washington.

Md., Rockville—Ancient Free and Accepted Masons, R. Shaw, interested, reported, plans \$35,000 temple; brick, 2 stories.

Mo., Bakersfield—Ancient Free and Accepted Masons, J. F. Singer, Sec., reported, receiving bids for \$20,000 store and lodge bldg.; brick, 2 stories; Heckenlively & Mark, Archts., Landers Bldg., Springfield. 11-28

Mo., West Plains—Ancient Free and Accepted Masons, L. R. Dudley, member, plan 2-story brick temple.

N. C., Charlotte—Scottish Rite Masons, C. W. Norman, member, purchased site, Central Ave. and Louise Ave.; plans \$500,000 cathedral; work may not start in near future.

Tex., Austin—Knights of Columbus, Frank Compton, member, Bldg. Comn., erect \$35,000 clubhouse, W. 4th St. near Colorado Ave.; Giesecke & Harris, Archts., Norwood Bldg.

Tex., San Benito—Valley Shrine Club, John T. Thompson, Pres., Harlingen, plans bldg., Arroyo Colorado bet. San Benito and Harlingen.

W. Va., Bluefield—Loyal Order of Moose, care Alex B. Mahood (architect), member of Bldg. Comn., plans to break ground within 30 days for \$10,000 bldg., Mercer St. and McCulloch Ave.; brick, 2 stories. 2-2-28

Bank and Office

Ky., Russell—Chesapeake & Ohio Railway Co. erect \$140,000 office bldg. at new hump at Russell.

Okla., Tulsa—A. J. Love & Co., Archts., Atco Bldg., completing revised plans for 2-story office bldg., Fourth and Elgin Sts.; brick, 25x60 ft.

Tex., New Braunfels—First National Bank erect \$60,000 bldg.; brick, stone and conc., 1 story, 50x80 ft.; Giesecke & Harris, Archts., Norwood Bldg.; Jeremiah Schmidt, Asso. Archt., New Braunfels; Munsey Wilson, Struct. Engr.; L. D. Royer, Mech. Engr., both care Archts.; plans just started. 1-16

Churches

Ala., Anniston—Northside Baptist Church, Rev. W. A. Broome, Pastor, has broken ground for first unit of brick bldg., 21st St. and Gurnee Ave.

Ala., Fairhope—Church of Christ, Scientist, Geo. E. Fuller, member, has plans completed for brick bldg.; 1 story and basement, 40x50 ft., tar and gravel roof, hot air heat; Lowe & Speer, Archts., 636 Church St., Evanston, Ill. 1-2

D. C., Washington—Mrs. V. McClure Church, care J. J. Whelan, Archt., 1147 Connecticut Ave., N. W., remodel residence; \$20,000.

Fla., Daytona Beach—Methodist Episcopal Church, South, Rev. Paul L. Redfern, Pastor, plans \$100,000 building.

Fla., Jacksonville—St. Marks P. E. Church, Rev. D. B. Leatherbury, Pastor, erect brick bldg.; conc. footings, comp. roof; Marsh & Saxelby, Archts., Consolidated Bldg.

Ga., Atlanta—Hebrew Benevolent Congregation, Harold Hirsch, member, Bldg. Comn., Hurt Bldg., has low bid from Griffin Construction Co., 452 Spring St., N. W., for \$450,000 synagogue; Hentz, Adler & Shutze, Archts., Candler Bldg.; Robt. S. Fliske, Const. Engr., Healey Bldg. 1-9

Ga., Vidalia—First Baptist Church, Dr. J. C. Brewton, Pastor, will purchase pipe organ; recommendations at meeting in February.

Ky., Glasgow—Christian Church erect brick, conc. and stone Sunday school after plans by Churchill & Gillig, Archts., Fayette Bank Bldg., Lexington; 2 stories and basement, 50x75 ft.; bids in. 1-16

La., Oakdale—First Baptist Church rejected bids for bldg.; Daniel & Smith, Archts., Beaumont, Tex. 1-23

Mo., Cape Girardeau—Red Star Baptist Church, Rev. W. E. Hicks, Pastor, erect 2-story Sunday school annex and remodel main bldg.; 150 additional seats in main auditorium; 8 classrooms; soon let contract.

Mo., Kansas City—Roanoke Presbyterian Church start work in April on \$90,000 bldg., 42nd St. near Genesee St.; 2 wings connected by tower, 100x48 ft. and 100x40 ft., former seat 500, latter 3 stories, accommodate 600, brick, cut stone trim, slate roof; Felt, Dunham & Kriehn, Archts., 300 W. 47th St. 8-22

N. C., Charlotte—Roman Catholic Diocese, Rev. Wm. Hafey, Bishop, Diocese of Raleigh, may erect church, school, gymnasium, etc., in Dilworth.

N. C., Charlotte—Westminster Presbyterian Church, R. E. Forbis, Chmn., Bd. of Deacons, care Chemical Construction Co., 1206 South Boulevard, plans bldg., E. Morehead St. and Dilworth Rd.

Okla., Lawton—First Christian Church considers rebuilding structure lately noted burned at \$90,000 loss. 1-23

Okla., Miami—Protestant Episcopal Church, Colored, have plans completed in Feb. or in March for \$18,000 bldg.; brick and conc.; 1 story; Leonard Bailey, Archt., Colcord Bldg., Oklahoma City. 8-29

Okla., Wewoka—Guy C. Reid, Archt., Oklahoma Saving & Loan Bldg., Oklahoma City, drawing preliminary plans for \$45,000 church.

Okla., Woodward—First Christian Church erect \$50,000 auditorium addition; semi-fireproof, 65x75 ft.; Walter T. Vahlberg, Archt., Braniff Bldg., Oklahoma City.

Tenn., Memphis—Buntyn Methodist Church, C. B. Procter, Chmn., Bldg. Comn., 3550 Myunder St., erect \$150,000 church and Sunday school, Highland St. and Mynders Ave.; \$85,000 auditorium first.

Tex., Lamesa—First Baptist Church, M. L. Lindsey, Chmn., Bldg. Comn., having plans drawn by Harvey Beauchamp, 3205 Drexel Drive, Dallas, for \$85,000 bldg.; work probably start in Spring or early Summer. 12-26

Tex., Liberty—Baptist Church, Rev. Verner Stokes, Pastor, plans \$25,000 building.

Tex., Navasota—First Baptist Church erect rough stone and wood auditorium; \$13,000; sketches ready for approval; 1 story and balcony, oak floors, asbestos shingle roof; Will N. Noonan Co., Archt., Bldrs. Exchange, San Antonio. See Want Section—Building Material and Equipment. 1-23

Tex., Rio Hondo—Community Church, Henry Ullrich, member, Supvg. Comm., soon start work on building.

Tex., San Antonio—Carmelite Fathers, care Edw. Soler, 908 Kentucky Ave., soon have plans ready for church and priests' home for Shrine of the Little Flower parish, N. Zarzamora St. and Kentucky Ave.; fireproof, tile, stone, struct. steel, brick and rein. conc., tile, conc., rubber tile, cement, wood and terrazzo floors; \$300,000; C. L. Monnot, Archt., Perrine Bldg., Oklahoma City, Okla. 10-24

City and County

Ala., Florence—Lauderdale County Bd. of Revenue, A. J. Darby, member, may improve and enlarge jail; Pauly Jail Building Co., 2215 DeKalb St., St. Louis, Mo., will submit bid.

Ark., Little Rock—City, Patrick L. Robinson, Mayor, selected Thos. Harding, New Donaghey Bldg., H. Ray-Burks, Wallace Bldg., and Wittenberg & Delony, Home Ins. Bldg., as architects for 3 fire stations, 14th and Pulaski Sts., Prospect Ave. and Harrison St. and Sixth and Fletcher Sts.; also remodel and erect annex to fire station, Prospect Ave. and Beech St. 12-12

Ark., Magnolia—Columbia County, Emmett Atkinson, County Judge, voted tax to repair courthouse and erect jail; latter brick and conc., 2 stories. 12-5

Ark., Pine Bluff—Pine Bluff Library Assn. will petition City Council to call election on library bonds, probably in March.

Ark., Russellville—City Council considers calling election on \$100,000 bonds, including amount for community building.

Fla., Jacksonville—City Comsn., F. M. Vaiz, Chmn., receives bids until Feb. 3 for second-story to police sub-station, McDuff Ave. near Forbes St.; revised plans from Marsh & Saxelby, Archts., Consolidated Bldg. 8-8

Md., Annapolis—City, A. T. Elliot, Chmn., of Market Comm., 179 Maine St., plans \$25,000 market, Market Space; brick, 1 story; R. Malcolm Cutter, Archt.; plans not yet accepted.

Miss., Greenville—Following contractors estimating on alterations and additions to Washington County courthouse and jail, bids Feb. 3 by County Bd. of Supvrs.: Beckelheimer & Small, Hattiesburg, Miss.; John Garrett, Lampton Bldg.; W. J. McGee & Son, Lamar Bldg., both Jackson, Miss.; W. R. Ellis, Clarksdale, Miss.; Estes-Williams Construction Co., Dermont Bldg., Memphis, Tenn.; Currie & Corley, Raleigh, Miss.; Lockard & Vaughan, Meridian, Miss.; J. M. Spain, Archt., Iilsaps Bldg., Jackson. 1-16

Mo., Clayton, St. Louis—Aegerter & Bailey, Archts., Railway Exchange Bldg., John C. Stephen, Asso. Archt., Chemical Bldg., and Taxis & Becker, Const. Engrs., Chemical Bldg., have prepared sketch for \$2,000,000 courthouse and jail for St. Louis County; proposition may be submitted to bond election; Walter E. Miller, Clk. of St. Louis County.

Mo., West Plains—Howell County defeated \$125,000 courthouse bonds; Earl Hawkins, Archt., McDaniel Bldg., Springfield. 12-19

Okla., Edmond—City, J. F. Baldwin, City Clk., selected Butler & Co., Insurance Bldg., Oklahoma City, as architects for \$20,000 city hall and fire station. 11-21

Okla., Muskogee—City may soon call for bids for \$400,000 city hall; Brick, rein. conc. and stone, 3 stories and basement, 140x202 ft., wood, cement, tile and terrazzo floors, steam heat; Layton, Hicks & Forsyth, Braniff Bldg., Oklahoma City, and L. L. Howenstine, Manhattan Bldg., and H. H. Nieman, Barnes Bldg., both Muskogee, architects. 12-19

Tenn., Chattanooga—Eugene Bryan, City Commr., has tentative sketches by R. H. Hunt Co., James Bldg., to remodel city hall; Mr. Bryan may recommend project to Bd. of Commrs.

Tex., Boerne—Kendall County votes March 1 on \$20,000 courthouse improvement bonds.

Tex., Bonham—Fannin County Bd. of Commrs., C. A. Wheeler, County Judge, selected Wyatt C. Hedrick, Inc., First Natl. Bk. Bldg., Fort Worth, as architect and Sparger & Peters, Bonham, as asso. architects for courthouse.

Tex., Denton—City B. W. McKenzie, Mayor, receives bids Jan. 28 for 2 fire stations. 1-2

Tex., Houston—City, W. E. Montelith, Mayor, receives bids Jan. 29 at office City Sec. for repairs to North Side Library, 1310 Henry St.; plans from City Engr.

Tex., Liberty—Liberty County Bd. of Commrs., C. R. Wilson, County Judge, tentatively decided to call election on courthouse bonds. 1-23

Tex., Palestine—City, F. H. Ellenberger, Police and Fire Commr., erect fire station, Brazos St. near S. Royal St.; brick, 2 stories; Theo. S. Maffitt, Archt.

Tex., San Antonio—City opens bids Feb. 3 at office Fred Fries, City Clk., for restoration of Old Spanish Governor's Palace for museum; Harvey P. Smith, Archt., Natl. Bk. of Commerce Bldg. 1-9

Va., Keysville—Charlotte County Bd. of Supvrs., Dr. C. W. Tucker, member, plans jail.

Dwellings

Ala., Florence—Van Arnold erect brick, stone and conc. residence, Wood Ave.; 2 stories, and basement, 40x70 ft.; Geo. D. Waller, Archt., Ind. Life Bldg., Nashville, Tenn.

Ark., DeQueen—M. F. Allen plans to rebuild burned residence; \$10,000 to \$12,000; 2 stories, oak and tile floors.

D. C., Washington—Mitchell Quick, Tower Bldg., erect \$10,000 residence, 5822 Nevada Ave., N. W.; brick, 2 stories.

D. C., Washington—J. J. James, 1226 14th St., N. W., erect 2 brick dwellings, 714-16 Marietta Place, N. W.; 2 stories; \$12,500.

Fla., Palm Beach—Richard A. Cavanaugh, 209 Clark Ave., erect residence; Volk & Maass, Archts., Plaza Bldg.; bids Feb. 3; following contractors estimating by invita-

tion: DaCamara-Chase, Inc., Plaza Bldg.; Arnold Construction Co., Murray Bldg.; Chalk & Lund, Inc., Harvey Bldg.; J. S. Willson, 604 S. Olive St.; C. J. Trevail, Citizens Southern Bk. Bldg.; Harrison Construction Co.; J. R. Wakeman, 6201 Gordon Ave.; Wilcox Construction Co., Guaranty Bldg., West Palm Beach.

La., Monroe—Roy Hale, care Motor Supply Co., 408 Washington St., erect \$10,000 Colonial residence, Second and Glenmar Sts.; 2 stories, brick; J. W. Smith & Associates, Archts., Ouachita Natl. Bank Bldg.

La., New Orleans—Jas. Gould, 1026 Brooklyn Ave., Algiers, erect single raised residence, Elmira Ave., near Eliza St.; bids Jan. 30.

La., New Orleans—Chas. Frank, 317 Magazine St., considers erecting single raised dwelling, State and Patton Sts.

La., New Orleans—Mrs. L. T. Heintz, St. Johns Court, erect 1-story frame residence, St. Johns Ct. near Dumaine St.; tile baths, tile and comp. roof; E. F. Spori, Archt., Vincent Bldg.; ready for bids.

Mo., Kansas City—H. F. Steen, Dist. Mgr., Safeway Stores, Inc., 2101 Broadway, erect English type residence, W. 61st St. near Ward Pkwy., Hampstead Gardens.

Mo., Springfield—S. E. Dobbs, 530 W. Lynn St., has plans by Heckenlively & Mark, Landers Bldg., for \$17,500 residence; brick, 2 stories.

Mo., St. Louis—Wm. D. Orthwein, Jr., Litzinger Rd., Deer Creek Village, erect 2-story and basement addition to residence; 2 baths; Maritz & Young, Archts., Chemical Bldg.

Mo., St. Louis—W. P. Manske & Associates, Archts., 4526 Olive St., advise plans for erection of residence for A. H. Koppen, 4922 Tholoan St., abandoned.

Okla., Ponca City — Roy Williams erect residence; Leonard Bailey, Archt., Colcord Bldg., Oklahoma City; preliminary plans.

Tenn., Chattanooga—Scott Probasco, care American Tr. & Sav. Bank, receives bids Feb. 4 for residence, Riverview; brick, stone trim, 3 stories and basement, 123x49 ft., conc. footings, tile, marble, slate, Crab Orchard stone, Armstrong linoleum and hardwood floors, slate and comp. roof, 2-story conc. and brick garage, Warren Webster modulating system heat; Pringle & Smith, Archts., Norris Bldg., Atlanta, Ga.; following contractors estimating: Sam N. Hodges Co., Erlanger Bldg.; W. P. Francis, 201 Luckie St., N. W.; Flagler Co., Red Rock Bldg., all Atlanta; Orr-Barnes Co., Volunteer Life Bldg.; Geo. Becking & Sons, James Bldg.; Selman & O'Brien Co., 610 Georgia St.; T. S. Moudy Co., Chamberlain Bldg.; Home Builders Service Co., 827 Broad St., all Chattanooga.

Tenn., Jackson — Rev. C. N. Jolley erect \$15,000 brick veneer residence; 2 stories, 41x37 ft., tile roof; Luther Parham, Archt., 386 N. Hayes Ave.; plans complete.

Tenn., Memphis—South Memphis Land Co., Frank Ave., plans number dwellings during 1930; brick veneer, fire-resisting laths and sheathing, Curtis woodwork, brass plumbing, asbestos shingle roofs, \$4000 to \$8500 each.

Tenn., Memphis — Julian Fulenwider, 46 West Virginia St., erect stone veneer residence, Chickasaw Gardens; 1½ stories, hardwood floors, tile roof, tile bath, steam heat; plans complete.

Tenn., Trenton—H. H. Elder, Pres., Chamber of Commerce, T. K. Hoppel, Pres., Gibson County Bank, and others organizing company to erect additional dwellings for operatives of Trenton Mills, Inc.; work to be done by local contractor.

Tex., Houston—W. R. Reid, Denver Addition, erect 3 brick veneer dwellings, 3408 E. Montgomery, 2211 Dunraven and 1115 Burkett Sts.; 5 rooms; \$10,500.

Tex., Houston—D. E. Smith, 3910 N. Main St., erect 8 dwellings, Tabor, Cottage, Opal, Diamond, Ruby and Haddon Sts. and Dell Court; brick veneer, 4 and 6 rooms; \$15,000.

Tex., Houston — Minor Stewart, Pres., Houston Abstract Co., Post-Dispatch Bldg., advises will not build; site purchased for investment.

Tex., Junction—James Paterson, care Luther H. Hill, Archt., State Bk. Bldg., erect stone, stucco and rein. conc. ranch residence near Junction; 2 stories and basement, about 72x44 ft., 3-car garage with laundry and servants' quarters; plans about Feb. 15.

Tex., San Antonio—A. B. Phelps, 401 Dewey Place, has low bid at \$13,794 from M. L. Case, 122 W. White St., for residence; Adams & Adams, Archts., Real Est. Bldg. 1-10.

Tex., San Benito—F. S. Robertson rejected bids for residence; Harvey P. Smith, Archt.-Engr., Natl. Bk. of Commerce Bldg., San Antonio.

Government and State

Ala., Fort McClellan, Anniston—War Dept., Office Constructing Quartermaster, 1st Lt. O. E. Davis, Fort McClellan, receives bids in triplicate until Feb. 24 for 7 non-commissioned officers' quarters.

Ark., Clarksville — Arkansas National Guard, Little Rock, rejected bids for \$20,000 armory; brick, stone and conc., 2 stories, 70x100 ft., conc. and wood floors, comp. roof; Durward F. Kyle, Archt., National Bldg., Pine Bluff.

Md., Baltimore—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., will soon let contract for post office, site present structure; N. P. Severin Co., 222 W. Adams St., Chicago, Ill., submitted low bid at \$2,599,000 for limestone with alternate of \$2,935,000 for marble; structure fireproof, modified Classic, granite to first floor, limestone above, 6 stories, basement and sub-basement, interior courts faced with light colored brick and stone trim, main entrance on Calvert St., second entrance on Fayette St.; 4 freight elevators, special mail chutes and mechanical conveyors for post office; 4 passenger elevators, heating plant, fuel storage and supply rooms in sub-basement; parcel post div., public lobby, Lexington St. entrance, interior driveway from Guilford Ave., printing office, etc., in basement; post office on first and second floors; Third Army Corps to occupy third floor; fourth and sixth floors for Federal officials; fifth floor to contain 3 court rooms with offices; tunnel under Calvert St. to extend to Federal Reserve Bank at Calvert and Lexington.

Tenn., Trenton—Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C., reported, plans to purchase site for \$100,000 to \$150,000 post office.

Va., Fort Myer—Constructing Quartermaster soon call for bids for addition to service detachment stable; \$19,700.

Va., Richmond—Additional contractors estimating on \$1,500,000 extension and remodeling of post office, bids Feb. 19 by Treasury Dept., Jas. A. Wetmore, Act. Supvg. Archt., Washington, D. C.; W. D. Lovell, 1415 Eighth St., S. E., Minneapolis, Minn.; W. P. Rose Co., Goldsboro, N. C.; Strandberg Bros. Co., Transportation Bldg., Chicago, Ill.; Wm. MacDonald Construction Co., Synd. Tr. Bldg.; Murch Bros. Construction Co., Rwy. Exch. Bldg., both St. Louis, Mo.; W. E. Rowan, Builders Bldg.; J. A. Jones Construction Co., Commercial Bk. Bldg., both Charlotte, N. C.; Doyle & Russell, Grace Amer. Bldg.; Davis Bros., Inc., Builders Exch. Bldg.; Wise Granite & Construction Co., Inc., American National Bank Building; Jones & Wilson Co., Inc., Mutual Bldg., all Richmond; James Baird Co., 1800 E. St., N. W., Washington; National Construction Co., Glenn Bldg., Atlanta, Ga.; Charles Weltz' Sons, 713 Mulberry St., Des Moines, Iowa; Angle-Blackford Co., Amer. Exch. Bk. Bldg., Greensboro, N. C.; Virginia Engineering Co., Inc., 322 28th St., Newport News, Va.; Algernon Blair, First Natl. Bk. Bldg., Montgomery, Ala.; North-Eastern Construction Co., Nissen Bldg., Winston-Salem, N. C.

Hospitals, Sanitariums, Etc.

Ala., Gadsden — Missionary Servants of Most Blessed Trinity, operating Holy Name of Jesus Hospital, reported, receiving bids for \$750,000 hospital, S. Third St.; date not determined; Colonial type, T shape, 8 stories, including basement, sub-basement and tower room, about 900,000 cu. ft., 200 rooms, 120 patients' rooms, chapel seat 100, 3 operating rooms, elevators, elect. dumb waiter, subveyor for food trays, X-ray dept., special night light system, light call system; Schmidt, Garden & Erikson, Archts., 104 S. Michigan Blvd., Chicago, Ill.

Ala., Gadston—Ralls' Sanitarium soon start work on Spanish Mission type hospital addition; 3 stories; Dr. A. W. Ralls, owner.

Ark., Boonesville — Arkansas Tuberculosis Sanatorium Bd. of Trustees opens bids Feb. 3 for 2 hospital bldgs.; separate bids for elect. wiring, plumbing, steam heating; plans seen at office J. F. Loughborough, 314 W. Markham St., Little Rock, and at office Haralson & Nelson, Archts., Merchants Natl. Bk. Bldg., Fort Smith.

Ark., North Little Rock, Little Rock—U. S. Veterans Bureau, L. N. Tripp, Ch. Constr. Div., Arlington Bldg., Washington, D. C., reported, considering improvements to U. S. Veterans Hospital, Fort Logan H. Roots.

D. C., Washington—District Comm., Dist. Bldg., having plans drawn by A. L. Harris, plans \$15,000 clubhouse in Florence Village.

Municipal Archt., Dist. Bldg., for \$325,000 nurses' home, Gallinger Hospital; brick, 3 stories.

Ga., Atlanta—City Council, G. Everitt Millikan, Chmn., Hospitals and Charities Comm., rescinded ordinance calling for election Feb. 5 on \$3,000,000 hospital bonds.

Miss., Gulfport—U. S. Veterans Bureau, L. H. Tripp, Ch. Constr. Div., Arlington Bldg., Washington, D. C., erect recreation bldg., attendants' quarters, nurses' home, sewage disposal plant and addition to dining room and kitchen; enlarge farm; \$340,000 appropriation available; drawing plans. 1-2 under D. C., Washington.

Miss., Rosedale—King's Daughters receive bids Feb. 10 for brick hospital; \$30,000, 1 story, L shape; equipment \$10,000; James J. Broadwell, Archt., Amer. Bk. Bldg., Memphis, Tenn.

S. C., Florence—Dr. F. H. McLeod, Pres., Florence County Tuberculosis Assn. interested in erection of 40-bed tuberculosis sanatorium to be built jointly by Florence and Darlington counties.

Tenn., Columbia — Maury County Negro Hospital Bd. of Trustees considers raising funds for additional story.

Tex., Dallas—Dallas County Bd. of Com. Mrs. and Dallas City Council jointly erect \$80,000 laundry, Parkland Hospital.

Tex., San Antonio—Southland Nature Cure Sanatorium, Inc., care Dr. R. C. Reynolds, New Braunfels, erect fireproof bldg., Austin Rd.; 1 and 2 stories; Harvey P. Smith, Archt., Natl. Bk. of Commerce Bldg., San Antonio.

Hotels and Apartments

Ark., Conway—George L. Bachelor, 616 E. 7th St., Little Rock, expend \$10,000 for improvements to Revilo Hotel; 3 stories, brick, 55 rooms.

D. C., Washington—E. A. Smith, 923 Fifteenth St., N. W., erect \$625,000, 5-story, brick 130-apartment building; L. T. Rouleau, Archt., Investment Bldg.

La., Shreveport — Murray Warner, 602 Oneonta St., reported, plans apartment hotel, Fairfield and Mildred Sts.

Miss., Corinth—P. S. Weaver, Tupelo, soon let contract for \$28,000, 3-story, 41x96 ft., brick veneer, 4-apartment, Waldren and Cass Sts.; wood floors, comp. roof; Pole Agee, Archts., Fidelity Bank Bldg., Memphis, Tenn. See Want Section—Building Material and Equipment.

Miss., Greenwood — Hull & Malvaney, Archts., Merchants Bank and Trust Bldg., Jackson, advise that plans are being redigred for 73x80x120-ft., brick, stone trim, fireproof, 60-room addition and improvements to Wein-er Hotel.

Mo., Hermann—Hermann Hotel Corp., R. A. Breuer, Pres., erect \$100,000, 3-story brick hotel; W. Mame & Co., Archts., Buder Bldg., St. Louis, soon ready for bids.

Mo., Kansas City—F. E. Nolte, 2124 Summit St., erect 3-story, brick apartment, 2120-22 Summit St.

Mo., Maplewood, St. Louis—J. P. Fleming, 4460 Gibson Ave., St. Louis, erect \$100,000, 3-story, brick, 24-apartment, Lyndover Place; Marcel Boulicault, Archt., Ambassador Bldg., St. Louis.

Mo., University City, St. Louis—E. B. Kelley, Archt., 6625 Delmar Blvd., drawing plans for two \$20,000, 2-story, brick, 4-apartments—one at Dartmouth Ave., other location withheld.

S. C., Columbia—Owners, Jefferson Hotel, reported, purchased site adjoining hotel and erect \$300,000, 100-room addition.

S. C., Columbia—Miss Esther O'Brien reported, having plans prepared by Wilson & Tatum, Columbia Natl. Bk. Bldg., for 12-story hotel on site Hotel Jerome.

Tenn., Knoxville—W. M. Chester leased Oxford Hotel on W. Clinch Ave. and remodel; redecorate all rooms, install number baths.

Miscellaneous

Fla., Jacksonville—America's Play-Ground, Inc., being formed by E. Z. Jones, 325 W. Forsyth St., and associates to organize fishing, hunting and recreation clubs; plans erecting 4 log-cabin clubhouses in different sections of state, not less than 150 rooms; 100 log cabins with airport, golf links, tennis courts in connection.

Fla., Tampa — Italian-American League, Vincent Sempreviva, Pres., 5010 20th Ave., plans \$15,000 clubhouse in Florence Village.

N. C., Chapel Hill—Chi Psi Building Corp., 315 Cameron Ave., erect \$45,000, 2-story and basement, brick, English type fraternity house; slate roof; Atwood & Nash, Archts.

Tenn., Chattanooga — George Becking & Son, James Bldg., advise that they did not receive contract for \$15,000 studio for Stokes Commercial Photo Co., 515 Cherry St.; brick, stone trim, tile roof; Clarence T. Jones, Archt., James Bldg. 1-23

Tex., New Braunfels — Albert Nowotny soon call for bids for 2-story, 50x65 ft. museum building to be known as The House That Jack Built; frame and stucco with alternate on hollow tile, Aztec style, tile floors; Jeremiah Schmidt, Archt., Box 157. 11-28

Tex., Temple—Bd. of Directors, Chamber of Commerce, Joe T. Bonner, Pres., promoting erection market.

W. Va., Huntington—American Business Club, Henry Clay Cox, Chmn. Bldg. Comm., plans clubhouse.

Railway Stations, Sheds, Etc.

N. C., Durham—Southern Railway Co., G. L. Sitton, Ch. Engr., M. W. & S., Lines East, Charlotte, erect \$450,000, brick and steel, fireproof freight terminal; bids in. 1-23

W. Va., White Sulphur Springs—Chesapeake & Ohio Ry. Co., C. W. Johns, Ch. Engr., Richmond, Va., plans \$160,000 passenger station.

Schools

Ala., Auburn—Alabama Polytechnic Institute, Dr. Bradford Knapp, Pres., receives bids Feb. 12 for 4 buildings as follows: Shop building, 1 and 2 stories, 250 x 50 ft.; administration building 2 stories, basement and tower, 233x49 ft.; auditorium, 1 story and basement, balcony and attic, 144x132 ft.; textile building, 2 stories and basement, 300x60 ft.; all rein. conc., struc. steel, brick and tile, limestone trim, tile, terrazzo and comp. floors, Barrett built-up roof; Warren, Knight & Davis, Archts., Protective Life Bldg., Birmingham; following contractors estimating: Grahn Construction Co., Red Rock Bldg.; Southern Ferro Concrete Co., 70 Ellis St., N. E.; National Construction Co., Glenn Bldg.; A. K. Adams Co., 542 Plum St., N. W., all Atlanta, Ga.; Batson-Cook Co., West Point, Ga.; J. F. Holley Construction Co., 730 Nineteenth St., Ensley; D. A. Wallis & Co., Clark Bldg.; Smallman Construction Co., 1109 Fifth Ave., S.; Foster & Creighton, Protective Life Bldg., all Birmingham; W. L. Coston, Box 338, Bessemer; A. C. Samford; Frost Construction Co.; Algernon Blair, all Shepherd Bldg., Montgomery; Angle-Blackford Co., American Bank Bldg., Greensboro, N. C. 10-31

Ala., Mobile—Bd. of Education, W. C. Griggs, Supt., selected Owen & Clarke, 4 St. Joseph St., as architects for 4-classroom additions to Wood and Crichton schools; also having preliminary plans prepared by J. Platt Roberts, Springhill, Ala., for improvements to Oakdale school and by C. C. Yonge, for gymnasium at Murphy High School. 1-23

Ark., Fayetteville—National Chi Omega Society, University of Arkansas, receives bids Feb. 5 for \$25,000 conc. open-air theatre; Jamieson & Spearl, Archts., Arcade Bldg., St. Louis, Mo. 12-5

Ga., Atlanta — Hentz, Adler & Shutze, Archts., Candler Bldg., receive bids Feb. 7 for \$35,000, 2-story, basement and attic, 62x52-ft. brick veneer fraternity house for Chi Phi Fraternity, Emory University; following contractors estimating: A. K. Adams & Co., 542 Plum St., N. W.; Arthur Pew, Jr., Red Rock Bldg.; Yost Construction Co., Candler Bldg.; J. L. Hiery & Son, 445 Ridgecrest Ave., N. W.; Christian & Bell, Mortgage Bldg.; Crenshaw & McIver, Candler Bldg.; Permanent Builders; heating—Clare & Co., 354 Bona Allen Bldg.; Wm. A. Manning, 353 W. Peachtree St., N. W.; Buckhead Plumbing & Heating Co., 11 Roswell Road; M. M. Wise, Glenn Bldg., all Atlanta. 11-14

Ga., Augusta—Richmond County Bd. of Education, Lawton B. Evans, Supt., soon select architects to prepare plans for new school buildings for which \$1,000,000 was recently voted. 11-14

Ga., Columbus—School Bd., T. Hicks Fort, Chmn., receives bids Feb. 11 for gymnasium-auditorium addition to Industrial High School; 1 and 2 stories, 65x125 ft., brick, built-up roof, maple, oak, pine and conc. floors, vapor heat for entire building; convert present auditorium into classrooms; struc. steel work; separate bids on plumbing, heat-

ing and electric wiring; plans from T. Firth Lockwood, Archt., Murrah Bldg.; also receives bids same date for elementary school in St. Elmo section; 1-story and basement, brick, hollow tile, linoleum trim, tile or slate roof, wood floors, vapor heat; separate bids on plumbing, heating and electric wiring; plans from Chas. F. Hickman, Archt., Swift-Kyle Bldg. 11-21

Ga., Doerun—Following contractors estimating on 1-story and basement, 80x101 ft., brick veneer gymnasium-auditorium addition to high school, bids Feb. 5: Huber Construction Co. and W. J. Pippin, Moultrie; J. C. McCraney, Lovers Lane, Columbus; S. N. Adams & Sons, Tifton; J. M. Culpepper & Sons, Pelham; W. C. Hinton, Cordele; comp. roof, hardwood and tile floors; T. Firth Lockwood, Archt., Murrah Bldg., Columbus. 1-23

Ga., Macon—Bibb County Bd. of Education, Walter P. Jones, Supt., receives bids Feb. 6 for \$150,000, 2-story and basement, rein. conc., tile, brick, stone trim Lanier High School for Girls in Bellevue; built-up roof, tile and terrazzo floors, steam heat; Shelverton and Oliphant, Archts., Grand Bldg.; following contractors estimating: Southern Ferro Concrete Co., 70 Ellis St., N. E.; Norwood Griffin Co., Bona Allen Bldg.; A. K. Adams, 542 Plum St., N. W., all Atlanta; Batson-Cook Co., West Point; Chess W. Jones Co., Grand Bldg.; R. H. Smalling & Sons, Grand Bldg.; W. B. Griffin; W. A. Stillwell, 98 Ingleside Ave., all Macon; Ben H. Butts, Thomaston; Algernon Blair, First Natl. Bank Bldg.; A. C. Samford, 301 Washington Ave., both Montgomery, Ala.; R. A. Sundberg Co., 307 N. Royal St., Mobile, Ala.; T. C. Thompson & Bros., 609 N. Smith St., Charlotte, N. C.; Orr-Barnes Constr. Co., Volunteer Bldg., Chattanooga, Tenn. 1-23

Ky., Louisville — Bd. of Education soon have plans completed by J. Meyrick Colley, 1141 Dove Rd., for \$500,000 Crescent Hill Jr. High School overlooking Grinstead Drive between Peterson and Galt Aves.; install central radiocasting plant with receiving apparatus in each department and classroom.

La., Athens—Claiborne Parish School Bd., A. D. Dulaney, Chmn., receives bids Feb. 19 for \$70,000, 1-story, rein. conc., brick, stone trim high school; 18 classrooms, built-up comp. roof, wood floors; Edw. F. Neild, Archt., City Bank Bldg., Shreveport.

La., Clinton—East Feliciana Parish votes Feb. 19 on \$40,000 bonds for high school in Jackson school building district; brick, built-up roof, wood floors; E. L. Dunn, Pres., School Bd.; Herman J. Duncan, Archt., 120 Murray St., Alexandria.

La., Monroe — City, Arnold Bernstein, Mayor, having plans prepared by Smith & Land, Ouachita Bk. Bldg., for \$500,000 high school at Forsythe Park. 1-9

La., New Orleans—Orleans Parish School Bd., A. J. Tete, Sec., City Hall Annex, rejected bids and soon call for new bids for 4-story, 325x275 ft., rein. conc., brick and stone trim, 40-classroom Alcee Fortier High School; E. A. Christy, Supvg. Archt. for School Bd. 1-23

La., New Orleans—Following contractors estimating on underground trench work on campus H. Sophie Newcomb Memorial College, connecting various buildings with new boiler rooms, bids Feb. 6: John Riess, New Orleans Bk. Bldg.; Gervais F. Favrot, Balter Bldg.; Lionel F. Favret, Louisiana Bldg.; A. M. Fromherz, Queen & Crescent Bldg.; Geo. J. Glover Co., Inc., Whitney Bk. Bldg.; J. A. Petty & Sons, Inc., Godchaux Bldg.; J. V. & R. T. Burkes, Inc., American Bk. Bldg.; Chas. Gilbert Construction Co., Inc., Canal Bk. Bldg.; mechanical work—A. G. Rose, 526 Loyola Ave.; E. M. Babst Co., 1050 Camp St.; Sciambra & Masino, Inc., 636 N. Broad St.; C. C. Hartwell Co., Ltd., 409 Dauphine St.; American Heating & Plumbing Co., Inc., 829 Baronne St.; Cabirac-Gelpo Plumbing & Heating Co., 636 Carondelet St.; Emile Weil, Inc., Archt., Whitney Bk. Bldg.

Md., Baltimore—Bd. of Public Improvement Comm., H. J. Leimbach, Supvr. Engr., selected architects for following schools: West Baltimore Colored High School, Buckler & Penhagen, 325 N. Charles St.; addition to Garrett Heights School, Spencer E. Sisco, Continental Bldg.; addition to Brooklyn School, George R. Callis, Jr., Hearst Tower Bldg. 12-21

Md., Chevy Chase — Montgomery County School Commrs., E. Broome, Sec., Rockville, having plans prepared by H. W. Cutler, 1800 F St., N. W., Washington, D. C., for \$120,000, 3-story brick elementary school. 12-12

Miss., A. and M. College—Legislature will consider following building program submitted by Mississippi Agricultural and Me-

chanical College, Dr. B. M. Walker, Pres.: Gymnasium and field house, \$200,000; dairy building and equipment, \$150,000; engineering building and equipment, \$150,000; new residences, \$75,000; general repairs on College buildings and dormitories, \$110,000; dairy barn for working boys department, \$15,000, making total of \$700,000.

Miss., Jackson—Claude H. Lindsay, Archt., Edwards Hotel Bldg., receives bids Feb. 20 for \$100,000, 3-story, 97x38 ft., rein. conc., brick, stone trim dormitory for Bellhaven College, Dr. Guy T. Gillespie, Pres.; tile roof. 12-14

Miss., Rockport—Cotiah County Commrs., Hazlehurst, called election Feb. 7 on \$25,000 bond issue in School Dist. of Rockport, Union and Stronghope for Southeast Cotiah Consolidated High School.

Miss., Oma—Lawrence County Bd. of Supervisors, Monticello, called election Feb. 7 on \$25,000 bonds in East Cotiah Special Consolidated School Dist. for school building.

Mo., Ash Grove—Bd. of Education, Consolidated District No. 7, A. G. Hall, Pres., erect \$40,000, 2-story brick high school.

Mo., Avondale—Clay County Bd. of Education, E. L. Black, Supt., Liberty, erect 2-story, brick grade school; \$55,000; H. D. Pampel, Archt., Finance Bldg., Kansas City.

Mo., Dearborn—Bd. of Education, O. C. Hess, Pres., receives bids Jan. 28 for \$42,500, 1-story, 141x1200 ft., brick high and grade school; Barrett roof; H. E. Wagenknecht, Archt., 701 McDonald St., St. Joseph. 1-16

Mo., Desloge—Bd. of Education remodel and erect addition to brick school; Bonsack & Pearce, Inc., Archts., 411 Olive St., St. Louis.

Mo., Jefferson City—City, reported, planning \$400,000 school bond election.

Mo., North Kansas City—Clay County Bd. of Education, E. L. Black, Supt., Liberty, having plans prepared by H. D. Pampel, Finance Bldg., Kansas City, for \$80,000, 3-story brick addition to North Kansas City High School; also 2-story brick addition to McElroy Daags Grade School. 1-16

Mo., St. Joseph—Eckel & Aldrich, Archts., Corby Bldg., advise drawings and specifications for \$750,000 Sr. High School will not be completed until about June 1; 2 and 3 storeys and basement, brick, stone and rein. conc. 12-5

Mo., Tariko—Tariko College, Dr. J. A. Thompson, Pres., erect administration building and science hall to replace main building noted destroyed by fire at loss \$125,000.

N. C., Burlington — City voted \$195,000 bonds for school between Guthrie St. and Hillcrest Ave. and other school improvements. 12-26

N. C., Dilworth, Charlotte—Catholic Church completed plans and awaiting approval of Bishop Wm. Hafey for \$90,000 school in connection with group of buildings planned on 21-acre site, East and South Bldvs.

N. C., Lumberton—Thompson Institute rebuild main building noted burned at loss \$15,000.

N. C., Winston-Salem — Bd. of School Commrs., Henry Dwire, Chmn., receives bids Jan. 29 on 3-story and basement, brick high school, colored, 12th St. and Cameron Ave.; Harold Macklin, Archt., Realty Bldg. 1-23

Okla., Holdenville—Bd. of Education plans 3-story, brick, stone and rein. conc. building to replace Sr. High School recently destroyed by fire at loss \$100,000.

Okla., Muskogee—City votes Feb. 11 on \$200,000 bonds for school improvements to include \$85,000 gymnasium and practice room for Central High school; \$15,000 for misc. improvements; \$33,000 additions to Whittier and Longfellow schools; \$37,000 addition to West High school; John W. Porter, Pres., School Bd. 1-16

Okla., Oklahoma City—Bd. of Education, R. F. J. Williams, Pres., erect following school additions: Bath School, 6 classrooms and cafeteria, \$62,000; Cleveland, 6 classrooms and cafeteria, \$62,000; Edgemere, 7 classrooms and cafeteria, \$53,000; Gatewood, 6 classrooms and cafeteria, \$62,800; Harmony, 6 classrooms and cafeteria, \$62,800; Hawthorne, 8 classrooms, \$71,000; Heronville, 16 classrooms and cafeteria, \$142,300; Lee, 12 classrooms, \$125,700; Shields Heights, 8 classrooms, \$71,000; University Heights, 8 classrooms, \$86,000; Westwood, 4 classrooms, \$45,000; Capitol Hill Jr. High School, 10 classrooms, \$100,650, alterations, \$3,000; also for new buildings as follows: Elementary school southwest of present Co-

lumbus School, \$93,750; school west of Putnam Heights, \$97,650; Shidler school, 10 classrooms, \$125,000; school southeast of Shields Heights, \$97,000; Jr. High west of Capitol Hill, \$260,000, equipment, \$50,000; Jr. High northwest of Roosevelt, \$260,000, equipment, \$50,000; \$32,000 for alterations to 10 schools including 6 temporary classrooms at Riverside School to cost \$7,350; \$2,150,000,000 bonds recently voted. 12-26

Okla., Shawnee — A. C. Davis & Sons, Archts., advise bond election indefinitely postponed for erecting additions to Jefferson, Horace Mann, Woodrow Wilson, Washington and Sr. High Schools. 1-16

Okla., Vinita — Bd. of Education, W. L. Davis, Pres., decided not to erect gymnasium addition at present. 1-23

S. C., Greenville — Bd. of Education, J. L. Mann, Supt., having plans prepared by Beacham & LeGrand, Peoples Natl. Bk. Bldg., for 1-story, brick, 8-classroom and auditorium primary school on Anderson St. 12-26

Tenn., Martin — University of Tennessee, Knoxville, plans Industrial Arts Bldg. at University of Tennessee Junior College; contain laboratory, space for machinery, carpentry, electricity, forge and machine shop work; also plans physical education building, with auditorium to seat 1000 people, swimming pool, probably bowling alley. 1-23

Tenn., Saint Andrews — Saint Andrews Preparatory School for Boys, F. G. Stevenson, Bus. Mgr., rebuild administration building noted burned at loss \$25,000. 1-23

Tex., Harlingen — Dewitt & Washburn, Archts., Kirby Bldg., Dallas, preparing tentative plans for \$100,000 high school gymnasium and \$50,000 stadium; stadium seating capacity 10,000. 1-23

Tex., Lubbock — Bd. of Education, A. C. Jackson, Sec., soon ready for bids for \$650,000, 2 and 3-story, brick, tile and rein. conc. Sr. High School; conc., tile, terrazzo and wood floors; Peters, Strange & Bradshaw, Archts., Myrick Bldg. 11-14

Tex., Perryton — Perryton Ind. School Dist. votes Feb. 8 on two bond issues—\$60,000 for addition to present building for junior high school and \$90,000 for \$30,000 ward school and \$60,000 to be spent on addition to present school when needed; W. B. Irvin, Supt. of Schools. 1-23

Tex., Plainview — Bd. of School Trustees, Winfield Holbrook, Pres., erect \$90,000, 12-room auditorium and gymnasium addition to high school; Peters, Strange & Bradshaw, Archts., Lubbock. 1-23

Tex., San Antonio — Bd. of Education, Dr. J. A. McIntosh, Pres., has low bid at \$94,500 from G. W. Mitchell, Builders Exchange Bldg., for 16-room, assembly hall and cafeteria, fireproof Woodlawn School No. 34; plumbing and heating, \$12,300, Chalkley Bros., 1222 Navarro St.; electric, Thomson Electric Co., 1615 Broadway; Allee B. & Robt. M. Ayers, Archts.; Terrell Bartlett, Engr., both Smith-Young Tower; Phelps & Dewees, School Archts., Gunter Bldg. 1-2

Tex., San Antonio — Bd. of Education, Dr. J. A. McIntosh, Pres., has low bid at \$29,995 from Banspach Bros., 248 W. Josephine St., for 2-story, 8-classroom addition and remodeling assembly building at James Bowie School for cafeteria and assembly hall; brick, rein. conc., struc. steel, cast stone; J. Clyde & Percy Williams, Archts., Moore Bldg.; W. E. Simpson & Co., Engrs., Milam Bldg.; Phelps & Dewees, School Archts., Gunter Bldg. 1-2

Tex., Sonora — School Bd., L. W. Elliott, Pres., receives bids Feb. 13 for \$125,000, 2-story, 133x57 ft., 12-room and auditorium, brick, tile and rein. conc. high school; tile roof, cement, terrazzo and wood floors; Anton F. Korn, Archt., Thomas Bldg., Dallas, and San Angelo Natl. Bk. Bldg., San Angelo. 1-16

Tex., Sweetwater — City voted \$180,000 bonds for school buildings and improvements; C. H. Simmons, Pres., Bd. of Education; W. R. Griffith, Archt., Box 583. 1-16

Va., Charlottesville — School Bd., James G. Johnson, Supt., plans soon call for bids for \$245,000 elementary school on Belmont Ave.; Calrow, Wrenn & Fitzgibbon, Archts., Royster Bldg., Norfolk. 10-17

Va., Harrisonburg — Harrisonburg State Teachers College having plans prepared by Chas. M. Robinson, Inc., Times-Dispatch Bldg., Richmond, for \$170,000 administration building. 1-16

Va., Staunton — Bd. of Trustees of Stuart Hall plans \$100,000 academic building. 1-23

Stores

La., Cedar Grove, Shreveport — E. A. George, Archt., Shreveport, preparing plans for \$12,000, 32x56 ft., 2-story, brick commercial

building, Line Ave. and 70th St.; Joe Mandina, probably Contr., 829 Unadilla St., Shreveport. 1-23

Md., Baltimore — Heinrich Bucholz, 10 E. Centre St., has permit to remodel building, 619 St. Paul St., for store. 1-23

Mo., Jefferson City — L. Brunner, 707 W. Miller St., erect \$25,000, 2-story brick store and apartment. 1-23

Mo., St. Louis — Pretoria Realty Co. erect 2-story, brick store and office addition to building; H. Rush & Co., Archts., both 6035 Delmar Blvd. 1-23

Tenn., Knoxville — Hope Bros. (jewelry store), J. G. Carson, Gen. Mgr., 519 S. Gay St., soon let contract to remodel old Fidelity Trust Co. Bldg., 428 S. Gay St., for store; 5 stories; Baumann & Baumann, Archts., 813½ Market St. 1-23

Tex., Cuero — T. O. Reuss, owner and manager, Reuss Drug Store, erect brick, fireproof building adjoining property on Main St. 1-23

Tex., Dallas — J. W. Crowds Realty Co., plans to start work in about 30 days on 5-story, brick and conc. building, Orange and Ross Sts., for McKesson-Crowds Drug Co., both 1516 Commerce St.; \$500,000 including site and equipment; 82½x200 ft., 85,000 sq. ft. floor space; Roberts & Whitson, Archts., care T. P. Roberts, 3513 Drexel St.; this building, it is reported, is one of chain of 25 or 30 similar buildings which Roberts & Whitson will erect for McKesson-Robbins Drug Co. throughout country; McKesson-Robbins Drug Co. is parent firm of McKesson-Crowds Co. 1-23

Tex., Dallas — A. Harris & Co., Main St., plan to start work about Feb. 1 on \$100,000 5-story annex. 1-23

Tex., Houston — James Bute Investment Co., Vincent Chiodo, Pres., 719 Fannin St., remodel store, Fannin and Rusk Sts., to be leased to Vincent's (men's clothiers), 719 Fannin St. 1-23

Tex., Lockhart — M. Rosenwasser ready for bids about Feb. 7 for remodeling 2-story store and 2-story addition adjoining; \$17,500, hollow tile, brick and conc. frame; metal roof, wood floors; Jeremiah Schmidt, Archt., Box 157, New Braunfels. 1-23

Tex., San Benito — R. E. Mittanck erect 2-story, 48x150 ft., brick and tile building, E. Stenger St.; F. H. Trimble, Archt., Brownsville; bids in. 1-23

Va., Richmond — S. P. Bass and O. D. Brinser, 1624 Hull St., have permit for \$11,500 brick store, 1620 Hull St. 1-23

W. Va., Superior — Lake Superior Coal Co., E. R. Jackson, Local Mgr., plans rebuilding store destroyed by fire at loss \$50,000. 1-23

W. Va., Wheeling — S. S. Kresge Co., 74 W.

Adams St., Detroit, remodel building, 1135-37 Market St. 1-23

Theaters

Fla., Tallahassee — Tucker & Howell, Inc., Archts., Rhodes-Haverty Bldg., Atlanta, Ga., advise \$75,000 theatre for C. E. Daffin, 704 Monroe St., has been indefinitely postponed. 11-28

Ga., LaGrange — LaGrange Theater Building Corp., Robt. Hutchinson, Chmn., receives bids Feb. 3 (extended date) for 1-story, basement and balcony, 63x150-ft., stucco, struc. steel and brick theater and office building; cast stone trim, slate roof; Tucker & Howell, Inc., Archts., Rhodes-Haverty Bldg.; Robt. S. Newcombe, Engr., Walton Bldg., both Atlanta; following contractors estimating: Williams Construction Co.; Grahn Construction Co., Red Rock Bldg.; Wagar & Co., Norris Bldg.; W. P. Francis, 201 Luckie St., N. W.; LaGrange Lumber & Supply Co.; Newman Lumber Co.; Daniel Lumber Co., all Atlanta. 1-23

Miss., Macon — E. K. Kuykendall, Columbus, plans erecting moving picture theater. 1-23

Warehouses

Ala., Birmingham — Stockholm Pipe & Fitting Co., 4100 Thirteenth Ave., North Birmingham, erect 1-story, 50x160 ft. storage and distributing plant; \$50,000 including equipment. 1-23

Ala., Dothan — George Y. Malone erect warehouse for Firestone Tire & Rubber Co., Akron, Ohio. 1-23

D. C., Washington — J. E. Dyer Co., 3336 M St., N. W., has permit to remodel brick warehouse, 3300 M St., N. W.; \$30,000. 1-23

Md., Baltimore — Thomas H. O'Connor Co., Inc., 445-55 Guilford Ave., repair building recently noted damaged by fire. 1-23

N. C., Charlotte — New England Waste Co., Fred Falk, Southern Mgr., 408½ W. Trade St., remodel warehouse on 32nd St. at Southern Rwy.; 75,000 sq. ft. floor space. 1-23

N. C., Charlotte — Frederickson Motor Express Co., 425 W. Liddell St., soon start work on \$75,000, 3-story, brick and conc. warehouse, Hutchinson Ave. 1-23

N. C., Charlotte — E. C. Griffith, Johnston Bldg., erect \$50,000 warehouse and office, 1001 W. Morehead St., for Graybar Electric Co., 100 E. 42nd St., New York, M. C. Becker, Local Mgr., 1010 Dil Road; 60x170 ft., 1-story, with 2-story office portion in front, 40x60 ft.; 12,600 sq. ft. floor space; brick and frame with first floor conc. on ground; Lockwood Greene Engineers, Inc., 9 W. 3rd St., preparing plans and will supervise construction. 1-23

Tex., Fort Worth — Metropolitan Refining Co., Inc., New York, J. A. Cornwall, Local Mgr., establish warehouse. 1-23

BUILDING CONTRACTS AWARDED

Bank and Office

Md., Baltimore — Following sub-contracts let on 12-story Baltimore Life Insurance Co. office bldg.: Struct. steel, McClintic-Marshall Co., Oliver Bldg., Pittsburgh, Pa.; limestone, Ingalls Stone Co., Bedford, Ind.; test borings, Gow Co., subsidiary of Raymond Concrete Pile Co., 140 Cedar St.; rein. steel, Concrete Steel Co., 47 Broadway, both New York; fire escapes, Logan Co., 202 Buchanan St., Louisville, Ky.; excavation, Potts & Callahan, Knickerbocker Bldg.; double hung windows, Campbell Metal Window Co., Bush and Hamburg St., both Baltimore; Mottu & White, Archts., 527 N. Charles St.; J. Henry Miller, Inc., Eutaw and Franklin Sts., gen. contractor at about \$650,000, both Baltimore. 1-23

Okla., Holdenville — Farmers National Bank, R. White, Pres., remodel and enlarge bldg.; brick and tile, 2 stories, 25x30 ft., millwork, plumbing, fixtures; Votaw Construction Co., Contr. 1-23

Tenn., Nashville — Tennessee Products Corp., Nashville Tr. Bldg., remodeling warehouse, 14 Cummins Station, for offices; 4 stories, Brecko block, brick, steel sash, marble and mastic floors; \$25,000; Jos. W. Hart, Archt., Jackson Bldg.; Boone Construction Co., Contr., Independent Life Bldg. (Lately noted under Building Contracts Awarded—Warehouses.) 1-23

Va., Charlottesville — Virginia Public Service Co., Ridge and Main Sts., remodel and

erect additional story and 2 wings to office and display bldg.; Frank D. Chase, Inc., 720 N. Michigan Blvd., Chicago, Ill.; Charlottesville Lumber Co., Contr., Charlottesville. 1-23

Tenn., Chattanooga — St. Paul's P. E. Church, Z. C. Patten, Jr., Chmn., Bldg. Comm., let contract to T. S. Moudy & Co., Chamberlain Bldg., for \$27,000 Sunday school addition; brick, 2 stories, 50x75 ft.; J. G. Gauntt Co., Archt., Hamilton Natl. Bk. Bldg. 10-24

Churches

Ky., Lexington — Grace Baptist Church, Rev. W. L. Shearer, Pastor, soon start work on superstructure of \$30,000 auditorium, Bryan Station Pike and Loudon Ave.; brick; J. N. Merchant, Contr., 303 Desha Road. 7-18

City and County

Fla., Jacksonville — City Comsn. let contract at \$14,247 to H. S. Baird, Atlantic Natl. Bk. Bldg., for fire alarm headquarters, Laura and First Sts., and at \$22,585 to O. P. Woodcock Co., Lutz Bldg., for Fire Station No. 4, Jefferson and Duval Sts.; Jefferson D. Powell, Archt., Professional Bldg. 1-23

Miss., Jackson — Virginia Bridge & Iron Co., Roanoke, Va., reported, has contract for 250 tons struct. steel for Hinds County courthouse; Claude H. Lindsley, Archt., Edwards

Hotel Bldg., Jackson; Gardner & Howe, Struct. Engrs., Porter Bldg., Memphis, Tenn.; C. A. Peerman, Mech. Engr., 400 S. 21st St., Birmingham, Ala.; Angle-Blackford Co., Contr., Amer. Exch. Bk. Bldg., Greensboro, N. C. 1-23

Dwellings

Ala., Birmingham—Mrs. N. M. King, care Jacob E. Salle, Archt., Empire Bldg., let contract to Paul Bros. Construction Co., 2337 S. 20th Ave., for residence, Colonial Hills; brick veneer, 1 story, 56x41 ft., comp. roof, hot air heat. 1-2

Ark., Pine Bluff—S. Baim, Pres., Eagle Store, Fourth and Main Sts., erect 3 brick veneer dwellings, 29th and Cherry Sts.; 5 rooms; \$18,000; Quinn & Quinn, Contrs.

D. C., Washington—Boss & Phelps, 1417 K St., N. W., erect 6 brick dwellings and garages, 1533-43 Foxhall Rd., N. W.; 2 stories; \$40,000; owners build.

D. C., Washington—Cooley Bros., 1405 K St., N. W., erect 5 brick dwellings, 5720-30 Eighth St., N. W.; 2 stories; \$32,000; also \$12,000 dwelling, 822 Marietta Place, N. W.

Fla., Babson Park—Harry Vissering putting in conc. foundation for \$40,000 residence; conc. and hollow tile, 2 stories, 10 rooms, wood and tile floors, tile or slate roof; furnishings, equipment, etc., \$15,000; Schumacher & Winkler, Archts., 610 Morgan St., Tampa; owner builds. Address Mr. Vissering. See Want Section—Building Material and Equipment. 12-5

Fla., Miami Beach—Bankers Fidelity Investment Corp., D. H. Slenker, Pres., Realty Bldg., erect \$15,000 rein. conc., conc. block and stucco dwelling and garage, 3150 Sheridan Ave.; 2 stories, 37x33.6 ft.; Paist & Stewart, Archts., 1661 Alton Rd., Miami Beach, and Art Centre Bldg., Coral Gables; owner builds.

Fla., Miami Beach—Dr. Walter Barnes, Chicago, Ill., erect \$35,000 residence, 44th St. and Meridian Ave.; 2 stories, rein. conc., conc. block and stucco, steel sash, tile floors and bath, tile roof, orna. iron, cast stone; V. H. Nellenbogen, Archt., 925 Lincoln Rd., Miami Beach; Maine-Delburn Co., Contr., Congress Bldg., Miami; work started.

Fla., South Jacksonville, Jacksonville—B. N. Inman, 236 Lorretto St., erect 2 English type dwellings, Palmetto Ave. near Landon Ave., Shadyside; brick, 2 stories, 7 rooms; A. N. Burkholder, Contr.; plans number additional dwellings during 1930.

La., New Orleans—F. J. Bernius erect single residence, Lavender St. near Franklin Ave.; brick work, asbestos roof, orna. iron; O. F. Harang, Contr., 5663 Milne St.

La., New Orleans—Codifer & Bonnabel, Inc., Contrs., Balter Bldg., erect double dwelling, Bonnabel Place.

Md., Baltimore—Thos. Mullan, Bldr., 3945 Greenmount Ave., erect 5 brick dwellings, 305-13 Tuscany Rd., Tuscany; 2 stories; \$18,000.

Md., Baltimore—John H. Otto, Henry Ave., Fullerton, erect 2 frame dwellings and garages, 3021-23 Orlando Ave.; 1½ stories, 22x33 ft. and 12x18 ft., hot water heat; hot water heat; Edgar O. Bauer, Archt.; owner builds.

Md., Baltimore—J. S. Small, 6004 Falls Road, erect 13 brick dwellings, 3105-29 Crittenden Place; 2 stories, 13.3x33.4 ft., steam heat; \$25,000; F. E. Beall, Archt., 306 St. Paul St.; owner builds.

Md., Baltimore—J. P. Sollers, Jr., 1407 John St., erect 2 frame dwellings and garages, 5811-13 Clearspring Rd.; 2 stories, 22x30 ft. and 12x18 ft., slate roofs, hot water heat; J. A. Young, Archt.; J. A. Young, Inc., Contr.

Md., Baltimore—Jos. Peters, Bldr., 40th St. and Elsa Terrace, erect 16 brick dwellings, 1301-31 W. 41st St., after plans by Callis & Callis, Archts., Hearst Tower Bldg.; 2 stories, 14.10x43.6 ft. and 15.8x43.6 ft., hot water heat; \$40,000.

Mo., Baltimore—P. S. Morgan, Bldr., 514 St. Paul Place, erect stone dwelling, Belvedere Ave., Homeland; J. W. Wolcott, Archt., 324 N. Charles St.

Md., Baltimore—E. J. McGraw, Bldr., 110 St. Albans Way, erect stone dwelling, Tunbridge Rd., Homeland; W. P. Smith, Archt., 3434 Piedmont Ave.

Md., Baltimore—E. J. Gallagher Realty Co., 3501 Ednor Rd., erect 28 brick dwellings, Rexmore Rd.; 2 stories, 20x34 ft. and 20.4x41 ft., hot water heat; \$140,000; plans and constr. by owner.

Md., Baltimore—C. Fred Kraus, 322 N. Hilton St., erect \$15,000 residence and garage, 202 E. Gittings Ave.; 2½ stories, 38.8x35 ft., slate roofs, hot water heat; W. Roes, Archt.; Jacob A. Marriott, Contr., Rockdale, Woodlawn.

Md., Baltimore—Arrow Real Estate Co., 5445 Jonquil St., erect 10 brick dwellings, 5440-57 Jonquil and 5448-56 Narcissus, after plans by A. C. Dreyer; 2 stories, 19x34 ft., slate roofs, hot water heat; owner builds. 1-23

N. C., Durham—S. P. Alexander, 330 E. Main St., excavating for \$40,000 residence; brick, 2 stories and basement, 100x40 ft., hardwood floors, tile roof, brick foundation; Geo. Watts Carr, Archt., Forest Hill; Geo. W. Kane, Contr., Box 9. See Want Section—Building Material and Equipment. 1-23

Okla., Tulsa—Horace Anderson erect \$14,000 residence and garage, 2121 S. St. Louis St.; stone veneer, 2 stories and basement, 32x32 ft., 18x18-ft. garage and servants' quarters; day labor.

Tenn., Chattanooga—D. S. Latimore let contract to Orr-Barnes Co. for \$12,000 residence; brick and tile, 1½ stories, 50x36 ft., tile roof; Louis H. Bull, Archt., both Volunteer Bldg. 1-23

Tenn., Nashville—E. L. Hampton, Nashville Tr. Bldg., erect 2 brick veneer dwellings, 3001 Belmont Ave.; 1 story, hardwood floors, 6 rooms; \$12,000; owner builds.

Tex., Houston—Russell Brown Co., 3104 Main St., has permit for \$12,000 dwelling, 2510 Inwood Drive; brick veneer, 10 rooms; owner builds.

Tex., Houston—J. R. Ellis, 2018 Second Natl. Bk. Bldg., framing \$12,000 dwelling, 2415 Calumet St.; brick veneer, 2 stories, 39x32 ft., Redwood shingle roof; also erecting \$15,000 dt., ex, 1709 Wentworth St.; 2 stories, 12 rooms, 4 baths, similar constr.; plans, engineering and constr. by owner. See Want Section—Building Material and Equipment. 1-16

Tex., San Antonio—W. F. Morgan, care Morgan Oil Corp., Smith-Yong Tower, started work on \$300,000 residence, Almedia Circle, Olmos Park; fireproof, Italian type, rein. conc., tile and stucco, irregular shape, 2 and 3 stories, conc. piling foundation, mosaic tile terrace, 8 baths, roof garden, Aeolian pipe organ, gymnasium; swimming pool, sunken garden, etc.; Russell-Brown Co., Archt.-Contr.; G. N. Aneira, Supvg. Archt., both 3104 Main St., Houston; Matthews & Kenan, Conslt. Engrs., 1616 Smith-Yong Tower, San Antonio.

Government and State

Va., Fortress Monroe—Constructing Quartermaster let contract at \$195,000 to Davis Bros., Inc., Bldrs. Exch. Bldg., Richmond, for six 4-family brick and tile apartment houses for officers, Fort Monroe; 3 stories, 100x29 ft. each, oak floors, conc. foundations, slate roofs. 1-16

Hospitals, Sanitariums, Etc.

Ark., Little Rock—City Bd. of Public Affairs let contract at \$37,091 to McGregor & Pickett, A. O. U. W. Bldg., for annex to General Hospital; 3 stories; Thompson, Sanders & Ginochio, Archts., Hall Bldg. 1-9

La., Hospital, Alexandria—Page Steel & Wire Co., 230 Park Ave., New York, has contract at \$11,176 for fence and gates, U. S. Veterans Hospital. 12-12

Hotels and Apartments

D. C., Washington—Calvert Street Corp., Chas. Hunt, Sec., 1106 Vermont Ave., has permit for apartment at 2500 Calvert St.; \$1,500,000, 8 stories, brick, conc. and stone; Harry M. Bralove, Bldr., 1106 Vermont Ave.; J. Abel, Designer, 613 7th St., N. W. 12-19

Mo., Springfield—John Landers Estate, J. A. Nichell, 480 N. Main St., let contract to M. E. Gilloz, Monett, for \$100,000 alterations to Colonial Hotel; brick; Earl Hawkins, Archt., McDaniel Bldg. 9-12

Mo., St. Louis—Bemis Way Corp. let contract to Hercules Contracting Co., Wainwright Bldg., for \$150,000, 6-story, fireproof apartment, Westwood Ave. and Bemis Way, in the Moorlands; George R. Bartling, Inc., Archt., 7411 Oxford Drive.

N. C., Hickory—J. O. Moore started work on brick veneer apartment on 12th St.; 8 apartments of 5 rooms each; L. L. Moss, Contr.; Q. E. Herman, Archt.

Tex., Brownwood—Brownwood Hotel, Inc., J. R. Repfree, let contract to J. O. Everett

Co., 1909 N. Harwood St., Dallas, for \$400,000, 9-story and basement, 146x100 ft., brick and stone, fireproof hotel; Wyatt C. Hedrick, Inc., Archt., First Natl. Bk. Bldg., Fort Worth. 1-23

Miscellaneous

D. C., Washington—Niepold's, Inc., 307 Seventh St., S. W., has plans by and let contract, on cost plus basis, to T. Warren Spencer, 1350 Jonquil St., for \$22,000, 3-story, 50x75 ft., brick addition to studio; slag roof, wood floors.

D. C., Washington—Shoemaker Bridge Co., Pottstown, Pa., has contract for 500 tons struc. steel for Shakespeare Library, E. Capitol St. near Third St., being erected by H. C. Folger, Standard Oil Co., 26 Broadway, New York; \$2,000,000, 2 and 3 stories, 216x112 ft., marble; James Baird Co., Gen. Contr., 1800 E St., N. W., Washington; Paul F. Cret, Archt., Otis Bldg., Philadelphia. 12-5

N. C., Winston-Salem—Edward Johnston, 6 S. Calvert St., Baltimore, Md., let contract to Real Estate Service Co., Nissen Bldg., for \$50,000 bowling parlor building, Third and Trade St.; 2 story and basement, 70x108 ft., steel, brick; install 22 bowling alleys and elaborate lighting system, modern heating and cooling systems; W. T. and Grady C. Shelton, Lessees, Nissen Bldg.; Hall Crews, Archt., Reynolds Office Bldg.

Tex., Fort Worth—Following initial contracts amounting to \$60,000 awarded in connection with rebuilding Casino Park at Lake Worth for Lake Worth Amusement Co., M. C. Harrold, Sec.-Treas., Bellefontaine, Ohio, Geo. Smith, Local Mgr.: Judd-Timmons Lumber Co., 2201 Eighth Ave., through Folsom Mills, Beaumont, to furnish 45 cars lumber; stucco and plastering, Frank B. Williams; hardware, Nash Hardware Co., 801 Jones St., through Hodgson Brothers; E. C. Katzmir to superintend construction; total cost \$225,000; dance hall 100x200 ft.; bath house 80x140 ft., stucco surmounted by 3-story tower 40x40 ft., with tile roof; boardwalk also to be rebuilt, part of which will be covered by low roof, supported by stucco partitions; Wyatt C. Hedrick, Inc., Archt., First Natl. Bk. Bldg. 1-23

Schools

Ark., Boles—Scott County, J. A. Gibbens, Supt., Waldron, let contract to Lamar Hall, Waldron, for \$14,000 brick veneer school. See Want Section—Building Material and Equipment. 1-23

Okla., Ardmore—Lady of Prompt Succor Parish, Rev. F. C. McCredy, Pastor, 125 East St., S. W., completed foundation for \$15,000, 2-story and basement, 30x41 ft., brick and tile 10-room building; Hugh McHarold Simeo, Archt., Norman; Hugh McIntyre, Contr.

Okla., Chelsea—School Bd. let contract at \$11,500 to W. E. Corlett, Vinita, for auditorium and gymnasium; A. J. Love & Co., Archts., Atco Bldg. and Loan Bldg., Tulsa. 10-10

Okla., Eufaula—Eufaula Boarding School probably let contract to J. E. Hudgens, McAlester, for \$15,000, brick veneer dining hall and kitchen; asbestos roof, maple and conc. floors; L. R. Carr, Archt., Box 438, Muskogee. 1-16

S. C., Windsor—Aiken County Bd. of Education, Aiken, let contract to Gallivan Building Co., Gallivan Bldg., Greenville, for \$30,000, 1-story and basement, brick veneer school; comp. roof; J. H. Johnson, Archt., Aiken. 1-23

Tex., Austin—University of Texas, J. W. Calhoun, Comptroller, let contract at \$21,400 to C. W. Moore, 609 W. 16th St., for 1-story, 250x31 ft., brick and rein. conc. locker room Texas Memorial Stadium; R. L. White, Supvg. Archt., University of Texas. 1-16

Tex., El Paso—Bd. of Education, J. Walter Morrow, Pres., let contract at \$296,748 to R. E. McKee, 1916 Texas St., for 2-story and basement, brick, rein. conc., fireproof high school; Brauntton & McGhee, Archts., First Natl. Bk. Bldg.; Guy L. Frazer, Asso. Archt., Martin Bldg. 1-16

Tex., San Antonio—Bd. of Education, Dr. J. A. McIntosh, Pres., let contract at \$77,488 to Guy C. Holder, 119 Moon St., for 16-room, assembly hall and cafeteria, fireproof, Ira H. Ogden School No. 31; Emmett T. Jackson, Archt., Bldrs. Exchange Bldg.; W. E. Simpson, Engr., Milam Bldg.; Phelps & Dewees, School Archts., Gunter Bldg. 1-23

Tex., San Antonio—Bd. of Education, Dr. J. A. McIntosh, Pres., let contract at \$65,774 to H. N. Jones Construction Co., 804

Avenue A, for 16-room and assembly hall, fireproof addition to David Crockett School No. 11; C. V. Scutter, Archt., Builders Exchange Bldg.; Matthews & Kenan, Engrs., Smith Yung Tower; Lloyd D. Royer, Mech. Engr., Smith Tower Bldg.; Phelps & De-wees, School Archts., Hicks Bldg. 1-2.

Tex., Tyler—Bd. of Education, J. M. Hodges, Supt., let contract at \$176,000 to Campbell & White, Tyler, for Oran M. Roberts Jr. High School and James S. Hogg Jr. High School; each 2 stories, 100x100 ft., brick, hollow tile, rein. conc., cast stone, terra cotta; terrazzo, conc. and wood floors; Bryan & Sharp, Archts., Construction Industries Bldg.; R. O. Jameison, Engr., Southwestern Life Bldg., both Dallas. 12-19

Va., Hopewell—School Bd. let contract at \$40,500 to Swain Contracting Co. and start work about Feb. 15 on 2-story, brick, fireproof school in Highland Park; Fred Bishop, Archt., Electric Bldg., Richmond. 12-26

Stores

Ala., Gadsden—A. W. Woodliff and R. D. Sturkie let contract to J. F. Holley Construction Co., Ensley, for \$40,000, 2-story, 50x115 ft., brick store, 309-11 Broad St., to be leased to Pizitz Smolian Co.; terra cotta front, built-up roof, steam heat, electric elevators; D. O. Whilldin, Archt., 517 N. 21st St., Birmingham. 1-23

Ga., Brunswick—Royal, Fendig & Shelander started work on 1-story brick store and office building on Newcastle St.; Bruce Wright, Contr.

La., Baton Rouge—Wm. L. Hause, 518 Goldenrod St., let contract at \$11,975 to Clifford H. King, Prescott St., Baton Rouge, for 1-story brick store, Government and Dufrocq Sts.; Jones, Roessle & Olschner, Archts., Raymond Bldg., Baton Rouge, and New Orleans.

N. C., Charlotte—Southeastern Construction Co., 210 W. Second St., has contract for 40x60 ft. store at 1317 E. 7th St. for Great Atlantic & Pacific Tea Co., S. Cedar St.

N. C., Charlotte—Sally's, Inc., J. Milton Eckerd, Pres., Richard B. Stitt, Mgr., expend \$50,000 to remodel and equip building on N. Tryon St. for soda, candy and luncheonette establishment; Southeastern Construction Co., Contr., 210 W. 2nd St.; M. R. Marsh, Archt., Builders Bldg.

Tenn., Nashville — Armstrong Women's Specialty Shop, 219 Fifth Ave., N., started work on \$25,000 improvements to store; reconstruct front and remodel interior; John Moore, Contr., 151 4th Ave., N.; O. J. Billis, Archt., Arcade Bldg.

Tex., San Antonio—Robert Thompson, Majestic Theater Bldg., started work on \$15,000, 1-story, 102x65 ft., brick, tile and conc., fireproof store, 2512-18 San Pedro St.; tar and gravel roof, wood and cement floors; Thompson Construction Corp., Contr., Majestic Theatre Bldg.; Eickenroht & Cocke, Archts., Maverick Bldg. 1-9

Theaters

Ga., Cartersville—Manning & Wink, care Grand Theater, purchased adjoining store and remodel for addition to theater; owner builds.

Warehouses

Ala., Dothan—Shell Petroleum Corp., Shell Bldg., St. Louis, Mo., let contract to H. H. Brown, Dothan, for conc., brick and steel distributing plant near Bay Line Depot.

Trade Literature

Specifications Manual.—The Southern Pine Association, New Orleans, has issued a manual of architects' specifications for Southern pine lumber covering its uses in residences, store and factory buildings and other types of construction. The publication was compiled as a convenient source of information on Southern pine lumber grades and specifications and is divided into four parts, Lumber Specifications for Various Uses, Construction Specifications, Description of Grades, and General Information.

Vibrating Screen.—The Stephens-Adamson Manufacturing Co., Aurora, Ill., manufacturers of conveyors and screens, are distributing a 16-page catalog illustrating and describing a vibrating screen recently placed on the market. It presents construction details, dimensions, capacity data and installation illustrations, describing unusual features of the screen, such as grid type support for screen cloth, suspension mounting for sub-base, quick action clamps for screen changes and self-contained vibrator mechanism which may be removed from the screen body as a unit.

Fire Extinguisher and Alarm.—The Firex Corporation of America, New York, is distributing a folder illustrating and describing the construction and application of the Firex automatic extinguisher and alarm, designed for first aid fire prevention. The device acts automatically as an extinguisher at approximately 130 degrees Fahrenheit and simultaneously sounds an alarm. Austin K. Hanks, Inc., Greensboro, N. C., is distributor for Virginia and the two Carolinas.

Blowers, Gas Pumps, Etc.—Publications issued in recent months by the Connersville Blower Company, Connersville, Ind., manufacturers of blowers, gas pumps, meters and cycloidal pumps, include bulletin 110 describing rotary positive blowers for medium range capacities and pressures; bulletin 305 devoted to gas meters; bulletin 123 describing the Boston type of rotary positive blowers, and bulletin 201 describing Connersville exhausters.

One-Man Shovel.—A two-color circular issued by the Trackson Company, Milwaukee, Wis., describes a new Trackson shovel introduced at the recent Road Show in Atlantic City. Emphasis is placed on advantages of the machine for excavation and other material-handling jobs, with specifications and views of the unit.

Solving Power Factor Problems.—A pamphlet is being distributed by the General Electric Company, Schenectady, N. Y., illustrating and describing the use of a scale for solving industrial power-factor problems. A few typical problems are worked out so the principles may be readily understood and applied.

Trade Standards.—The fourth edition of the Trade Standards of the Compressed Air Society, New York, has been published and copies may be purchased at 50 cents each. Material in the publication embraces a new formula for use in air compressor testing, said to be accurate for higher water columns than that previously used.

Compo-Board.—A booklet of unique design, incorporating a sample of Compo-Board as part of its mechanical make-up and illustrating and describing application of the product, is being distributed by the Compo-Board Company, Minneapolis, Minn. A feature of the product, which is extensively used in building construction, is a core of redwood.

Change in Name

The name of Brockland & Moore, Inc., advertising agency of St. Louis, Mo., was recently changed to Ralph Moore, Inc. No change is made in personnel or capitalization of the company, nor in office location.

Endorses Atlantan for Agricultural Award

Atlanta, Ga.—W. R. Tucker of this city has been endorsed by the Georgia Association for the Capper award for distinguished service to American agriculture and official documents presenting his name have been forwarded by F. H. Abbott, secretary of the Association to F. B. Nichols, secretary of the committee of awards at Topeka, Kans. Mr. Tucker, who is general agricultural agent of the Atlanta, Birmingham and Coast Railroad, worked out a process for the distribution of fresh sliced Georgia peaches, which is said to have met such wide approval as to warrant the belief that the process would permit marketing throughout the world of ripe Georgia peaches in palatable and attractive form during the whole year. Peaches gathered during the regular season are sliced, placed in paper containers, put in cold storage and may be served anywhere at anytime. Plans are said to be under way for the organization of plants to handle the Georgia peach crop next season under the new process.

Wage Scale Fluctuates With Price Level

The industrial relations policy of the Eagle-Picher Lead Company, operating in the Tri-State district, embracing Missouri, Kansas and Oklahoma, has had the effect of preventing a strike throughout its operations during the last 55 years. It has the distinction also of never having been asked by its workers for an increase in wages or a change in working conditions. This record is pointed to by O. N. Wampler, safety director of the company, in the "Mining Congress Journal." He states that "with the fair and liberal treatment of its employees, there has always been the friendliest feeling between the company and its workmen." The company has an established wage scale under which wages are raised or lowered as the price of ore fluctuates. With each \$5 raise or reduction in the price per ton of zinc ore, the wages are raised or lowered 25c per day.

\$5,000,000 Capital for Jacksonville Banks

Jacksonville, Fla.—Capital assets of the Atlantic National Bank of Jacksonville will be increased by \$600,000, according to action of the stockholders, and the capital of the Atlantic Trust Company, a holding company of the bank, will be increased by \$900,000, effective February 6. These increases will bring the capital assets of the Atlantic National to \$3,690,470 and those of the Atlantic Trust to \$1,317,872, making the combined capital assets of the two institutions more than \$5,000,000.

WANT SECTION

THE CLASSIFICATIONS IN THIS SECTION ARE:

Machinery and Supplies

Under this heading are reported requests for data, prices and literature and information on machinery, supplies and miscellaneous materials of a wide variety.

Building Materials and Equipment

This division comprises all classes and kinds of materials and equipment used in building and construction projects of every kind.

Bids Asked

Includes bids asked by U. S. Government, States, districts, municipalities, firms and individuals for machinery, materials, supplies and construction work.

Items in this department are published without charge and these columns are open for the publication of wants of all kinds relating to construction work, machinery, materials and supplies.

Machinery and Supplies

Canning Plant Equipment.—Proctor Brand Co., H. C. Brand, Mgr., Ooltewah, Tenn., constructing canning plant and wants following:

- (1) **Can Chutes**
- (2) **Cutter**—for green beans
- (3) **Boiler**—40 h. p., vertical, preferred
- (4) **Engine**—25 h. p.
- (5) **Peeling table**—for tomatoes
- (6) **Sceding Table**—or machine for tomatoes
- (7) **Vats**—for kraut.

Crane (Overhead, Travelling).—Ed. P. Phillips Machinery Co. (Construction Equipment and Contractors' Supplies), Ninth and Cary St., Richmond, Va.—Wants prices and data on overhead traveling crane; hand propelled and hand operated, 7 1/2-ton capacity, span—center to center of rails—37 ft. 9 1/2 in., distance from operating floor to top of rail 18 ft., distance from top of rail to underside of roof beam 4 ft., distance from center of rails to side walls 8 in., rails in 40-lb. sections, maximum lift 30 ft.

Marine Engine (Crude Oil).—Harrison Bros., Front and St. Anthony Street, Mobile, Ala.—Wants prices and data on 30-h. p. crude oil marine engine.

Pumps.—City of El Paso, Tex., S. F. Creclius, Engr.—Wants 2 pumps to handle storm sewage, capacity of 20,000 and 38,000 g. p. m. against head of 20 ft.

Rails (Relay).—W. M. Smith & Co. (Mech. Dealer), Birmingham, Ala.—Wants prices and data on 2000 to 5000 tons relay rails, 50 to 90 lb., in lengths from 5 ft. up.

Railway Equipment.—Everglades Construction Corp., Hialeah, Fla.—Wants prices and data on industrial railway equipment suitable for volume road building and consisting of following, to be used in Missouri and Illinois District:

- (1) **Cars**—15 to 20, 5-yd. dump
- (2) **Track (Double)**—approx. 2 mi.
- (3) **Traction Units**—2.

Rock Crushing Machinery.—George E. Petley, Winchester, Va.—Wants prices and data from manufacturers of rock crushing machinery, to produce 100 to 200 tons daily.

Guyan Machine Shops, Inc., Logan, W. Va.—Wants prices and data on following:

- (1) **Holsts**—for I beam, 1 to 3-ton capacity, a. c. and d. c., 200 volt
- (2) **Lathe**—about 20 in. x 16 ft., with taper attachment
- (3) **Motors**—a. c., 22-440 volts, 3 phase, 60 cycle, 5 to 100 h. p.
- (4) **Motor-Generator Set**—Ridgway, 150 or 220 kw. with 6600-volt, 60-cycle motor, 250-volt generator
- (5) **Punch and Shear**—preferably No. 1 1/2 Buffalo Universal Iron Worker
- (6) **Rotary Converter**—or motor-generator set, 25 cycle, to 250 volts, d. c.
- (7) **Squaring or Paper Shear**—about 36-in. capacity
- (8) **Truck (Motor)**—5-ton capacity
- (9) **Welding Machine**—200 to 300 ampere, gasoline driven.

East Kentucky Southern Railway Co., W. I. Webb, Grayson, Ky.—Wants prices and data on following:

- (1) **Lathes**
- (2) **Planers**
- (3) **Welder (Electric)**
- (4) **Machine Tools**—miscellaneous.

Miscellaneous

Bottles (Glass).—Lee Mason, 809 11th St., N. W., Roanoke, Va.—Wants prices and data from glass bottle manufacturers.

(Gas Heater) Radiants.—Columbus Iron Works Co., Columbus, Ga., manufacturer of circulating type gas heater—Wants prices on reflectors for use in gas heaters.

Tanks (Olive Oil).—Mohamed A. Barada, 107 Rue Zekak Lahjer, Fes, Morocco—Wants prices and data on tanks for storing olive oil; 50 to 100 gal., glass- or metal-lined; must not leave odor or taste on oil stored.

C. E. Reick, Route 3, Gainesville, Fla.—Wants prices and data on following:

- (1) **Bags (Glassine)**—for salted peanuts, 5-cent size
- (2) **Boxes**—candy
- (3) **Cans**—friction top
- (4) **Glucose (Corn Syrup)**
- (5) **Jars (Glass)**—3, 6 and 10 oz.
- (6) **Labels**—in 2 colors
- (7) **Nucoline (Cocunut Oil)**
- (8) **Paper (Waxed)**.

Tire Retreading Machine.—Wayne Tire Co., Inc., Goldsboro, N. C.—Wants prices and data on machine for recapping or retreading worn tires.

Building Material and Equipment

Louis H. Stoneman, Columbia, Va. will be in market in next 30 or 60 days for building material for hollow tile or cinder block residence complete with running water and hot water heat; \$5000 or \$6000.

Geo. W. Kane, Contr., Box 9, Durham, N. C. wants prices on following for \$40,000 dwelling:

- Roofing**—tile
- Steel Sash and Trim.**
- Harry Vissering, Babson Park, Fla.,** wants prices on following for \$40,000 residence:
- Cast Stone**
- Copper Gutters, Downspouts and Ventilators**
- Flooring**—hardwood, linoleum, terrazzo, tile
- Incinerator**
- Marble**
- Mould Metal Kitchen Trimmings**
- Ornamental Wrought Iron**
- Roofing (hip)**—slate, tile
- Roofing**
- Steel Sash and Trim.**
- Tile**—hollow.

J. A. Gibbens, Supt., Scott County Bd. of Education, Waldron, Ark., wants prices on following for \$14,000 school at Boles, Ark.;

- Metal Ceiling**
- Roofing**—asphalt shingle.
- J. R. Ellis, Bldr., 2018 Second Natl. Bk. Bldg., Houston, Tex.,** wants prices on following for dwellings:

- Electric Fixtures**
- Flooring**—tile for baths, etc.
- J. W. Smith & Associates, Architects, Onachita Natl. Bk. Bldg., Monroe, La.,** want prices on following for \$40,000, 1-story auditorium-gymnasium for high school at Farmerville, La.:

- Cast Stone**
- Plaster Board**
- Roofing**—built-up.
- P. S. Weaver, Tupelo, Miss.,** wants prices on following for \$28,000, 3-story apartment, Corinth, Miss.:

- Electric Refrigerators**
- Flooring**—hardwood, tile
- Roofing**—asbestos and asphalt shingle.
- Will N. Noonan Co., Archt., 301 Builders Exch., San Antonio, Tex.,** wants prices on following for \$13,000 church auditorium, Navasota, Tex.:

- Cast Stone**
- Flooring**—hardwood
- Limestone (native uncut)**
- Roofing**—asbestos shingle
- Ventilators.**

Bids Asked

Bridge.—State of Maryland. See Construction News—Roads, Streets, Paving.

Bridges.—State of Virginia. Bids for 3 bridges. See Construction News—Roads, Streets, Paving.

Bridges.—State of Texas. Bids for 2 bridges and overpass. See Construction News—Bridges, Culverts, Viaducts.

Bridge Removal.—U. S. Engr. Office, Masonic Temple, Jacksonville, Fla.—Bids Feb. 12 for removing abandoned bridge from Clearwater Harbor, near Clearwater, Fla.

Bridge Paint Materials.—State Highway Comm., Columbia, S. C. Bids Feb. 11 for cer-

tain bridge paint materials in specified quantities and meeting specifications, f. o. b. Camp Jackson.

Bridge.—State Highway Dept., Dover, Del. Bids Feb. 11 for bridge on Selbyville-Williamsville Highway, Cont. CS55-A, 1,050 cu. yd. excavation, 7,500 lb. reinforcement.

Bridge.—Columbia, S. C. See Construction News—Roads, Streets, Paving.

Engines (Gasoline).—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Feb. 11 for 15 gasoline engines, delivery Washington, D. C.

Building Materials.—Quartermaster, Fort Oglethorpe, Rossville, Ga.—Bids Feb. 5 for 270 bbl. cement, 75 cu. yd. sand, 125 cu. yd. stone, 18 doors, 6 screen doors, 12 galv. wire doors, 12 door casings, lumber sheathing, siding and 90 squares asphalt prepared roofing.

Cable, etc.—Chief of Supply Section, Office of Ch. of Engrs., 2726 Munitions Bldg., Washington, D. C.—Bids Feb. 14 for 10,000 ft. cable.

Cement, etc.—U. S. Engr. Office, Charleston, S. C.—Bids Feb. 11 for 1100 sacks cement, 95 tons sand, and 186 tons gravel.

Drainage Improvements.—Bd. of Commrs. of Caddo Levee Dist., Courthouse, Shreveport, La.—Bids Feb. 19 for improving drainage, Willow-Lake Lateral, north prong extension, 12,400 cu. yd. excavation. See Construction News Columns—Drainage, Dredging and Irrigation.

Drainage Improvements.—Mecklenburg Drainage Comm., Courthouse, Charlotte, N. C.—Bids Feb. 3 for drainage improvements, Upper McDowell Creek Drainage Dist., approx. 38,000 cu. yd. See Construction News Columns—Drainage, Dredging and Irrigation.

Drills, Hand Taps and Pressure Gauges.—U. S. Engr. Office, Huntington, W. Va.—Bids Feb. 4 for drills, hand taps and pressure gauges.

Dykes or Retards.—Bd. of Commrs. of Caddo Levee Dist., Courthouse, Shreveport, La.—Bids Feb. 19 for constructing 7 permeable crib deflection dykes, or current retards, about 1030 lin. ft. See Construction News Columns—Miscellaneous Construction.

Hose.—U. S. Engr. Office, Vicksburg, Miss.—Bids Feb. 3 for 400 ft., 4-in., 12-ply water hose, fitted with brass couplings.

Irrigation System.—Hidalgo & Cameron Counties Water Control and Improvement Dist. No. 9, W. C. Wise, Sec., Mercedes, Tex.—Bids Feb. 10 for constructing gunite lined canals and pipe lines. See Construction News Columns—Drainage, Dredging and Irrigation.

Lumber.—U. S. Engr. Office, McCall Bldg., Memphis, Tenn.—Bids Feb. 4 for 70,000 ft. b. m. building lumber, 60,000 ft. yellow pine, 37,851 ft. b. m. yellow pine, and 120,920 ft. pine lumber.

Machine Bolts and Washers.—U. S. Engr. Office, Huntington, W. Va.—Bids Feb. 5 for machine bolts and washers.

Machine Shop Equipment, etc.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Feb. 11 for engine lathe and motor driven drilling and tapping machines; bids Feb. 18 for motor driven tool-makers' lathe and engine lathe.

Miscellaneous.—Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids Feb. 6 for following, Sch. 2526:

Truck Jack, portable vise stands, paint pots, copper netting, hinges, hasps, screws, bolts, washers, cotters, cable terminals, fuse clips, etc.

Miscellaneous.—Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids Feb. 13 for following, Sch. 2527:

Automobiles, conc. mixer, gasoline engine, centrifugal pump, lamp-post parts, steel rails, stop watches, telephone cables, electric wire, magnet wire, etc.

Paint and Brushes.—Marine Corps, Q. M. Dept., Washington, D. C.—Bids Feb. 4 for 300 gal. ready mixed paint, and 100 paint brushes, delivery Quantico, Va.

Pipe (Cast Iron).—City of Wilmington, N. C., B. H. Dewey, Clk.—Bids Feb. 4 for 3300 ft. of 24-in. c. i. bell and spigot Class C pipe, American Water Works Assn. specifications, or on like amount of bolted joint pipe with turned and bored ends to carry working pressure of 130 lbs. per sq. in., with necessary fittings; state price f. o. b. Wilmington.

Pipe (Monolithic Gunite).—See Sewer Construction.

Pipe (Precast Concrete).—See Sewer Construction.

Pipe (Segmental Block).—See Sewer Construction.

Portland Cement.—Panama Canal, Office of Gen. Pur. Officer, Washington, D. C.—Bids Feb. 10 for Portland cement. Sch. 2525.

Pump Units.—Q. M. Corps, Langley Field, Hampton, Va.—Bids Feb. 10 for installing 2 electrically driven vertical centrifugal sewage pump units, together with all appurtenances thereto.

Ranges (Gas).—Q. M. Supply Officer, Washington, D. C.—Bids Feb. 17 for 950 gas ranges.

Roads.—Clearwater, Fla. See Construction News—Roads, Streets, Paving.

Roads.—Columbia, S. C. Bids for 3 roads. See Construction News—Roads, Streets, Paving.

Road.—Natchitoches, La. See Construction News—Roads, Streets, Paving.

Roads.—State of Virginia. Bids for 4 roads. See Construction News—Roads, Streets, Paving.

Roads.—State Highway Dept., Dover, Del. Bids Feb. 11 for 3 roads: Cont. 104—1.52 mi. Milford Cut-Off, 35,500 cu. yd. excavation and borrow, 3,800 cu. yd. cement conc. pavement, 2,000 lb. reinforcement; Cont. 140—

3.12 mi. Blackiston's-Maryland Line, 16,800 cu. yd. excavation and borrow, 5,420 cu. yd. cement conc. pavement, 7,000 lb. reinforcement; Cont. 141—4.82 mi. Owens-Ellendale, 19,000 cu. yd. excavation and borrow, 7,470 cu. yd. cement conc. pavement, 8,000 lb. reinforcement.

Roads.—State of Maryland. Bids for 2 roads. See Construction News—Roads, Streets, Paving.

Roads.—State of Louisiana. Bids for 2 roads. See Construction News—Roads, Streets, Paving.

Sewage System Accessories.—Sewerage and Water Bd., New Orleans, La.—Bids March 20 for Contract No. 203-S, furnishing frequency changers, switchboards and accessories.

Sewer Construction.—City of El Paso, Tex., R. E. Thomason, Mayor, S. F. Crece-lius, Engr.—Bids in about one month for \$120,000 storm sewers; 24-in. to 60-in. precast conc., segmental block and mono. gunite pipe; will consider any type of sewer proposal accompanied by specification and drawings if approved by Engr.

Sewer Construction.—City of Gretna, La., Chas. F. Gelbke, Mayor, Bids March 5 at office of Anthony Pierce, City Clk., 422 Fifth St., for construction of system of sanitary sewers.

Steel Cases.—Div. of Supplies, Dept. of Commerce, Washington, D. C.—Bids Feb. 3 for 26 steel cases for holding patented files.

Street.—Hallettsville, Tex. See Construction News—Roads, Streets, Paving.

Streets.—St. Louis, Mo. See Construction News—Roads, Streets, Paving.

Tank and Tower.—See Water Mains (Cast Iron).

Tenoning Machine.—Bureau of Supplies and Accounts, Navy Dept., Washington, D. C.—Bids Feb. 11 for single end cabinet tenoning machine.

Truck (Motor).—Office of City Secretary, Houston, Tex.—Bids Feb. 5 for 1-ton truck with express body.

Santry Heads Combustion Corporation

Wilfred R. Wood and the Irving Trust Company, receivers of the Combustion Engineering Corporation, New York, announce appointment of Joseph V. Santry as head of the corporation, to succeed Col. H. D. Savage, who is assisting the receivers. Mr. Santry became identified with the company soon after its organization in 1914, and served as director, vice president in charge of sales and as president, resigning about two years ago.

Curing Concrete.—The Philadelphia Quartz Company, Philadelphia, Pa., is distributing bulletin No. 31 on curing concrete with "Concrete Special" silicate of soda, applicable to curing concrete roads, sidewalks, curbing and base work. The product is applied to the surface of the concrete to seal it against evaporation of its moisture, to preserve its strength, it is said, by retaining the original water on which the ultimate strength of the cement depends.

St. Louis Chamber of Commerce Plans Active Campaign for 1930

St. Louis, Mo.—Two major projects to be undertaken in 1930 by the St. Louis Chamber of Commerce will include the initiation of a \$100,000 regional plan and a campaign to secure a St. Louis-New Orleans air mail line, according to President Walter B. Weisenburger in an address at the annual meeting of the organization. The association plans also to initiate a movement to enlarge the city's river terminal facilities and will continue its efforts to secure appropriations for the St. Louis-New York air mail line with extensions to the Southwest. Other projects listed for the attention of the association include the following: Survey of St. Louis immediate trade territory; push metropolitan area movement to consolidate St. Louis and St. Louis County; further plan to develop major street system; institute plan of revised system of assessment in the city; push completion of civic projects provided in \$87,000,000 bond issue of 1923; stage junior livestock show; initiate extensive advertising campaign to further agricultural activities in St. Louis trade territory; encourage freight and passenger use of St. Louis railroad gateway and pursue a study of railroad consolidation.

\$1,656,000 Bonds Sold

Chattanooga, Tenn.—Hamilton county bonds in the amount of \$1,656,000 have been sold to a group composed of Caldwell & Company, Nashville, Tenn.; Harris Trust and Savings Bank and the Continental Illinois Company, Chicago, and the Hamilton National Bank, Chattanooga. The issue embraces the following: \$500,000 tunnel bonds, \$100,000 bridge bonds, \$961,000 school bonds and \$95,000 Alton Park school bonds, all bearing an interest rate of 4½ per cent.

INDUSTRIAL NEWS OF INTEREST

Items of news about industrial, railroad or financial interests, building operations, construction work, municipal improvements, or the sale of machinery or the letting of contracts in the South or Southwest, are invited from our readers, whether they are advertisers, or subscribers, or not. We invite information of this character from readers in the North and West about their Southern business operations, as well as from Southern readers. News of value will be published just as readily when from non-advertisers as from advertisers.

Edison Lamp Works to Cleveland

About March 1, the Edison Lamp Works of the General Electric Company, Schenectady, N. Y., will be established in new and larger quarters at Nela Park, Cleveland, Ohio, where the administrative, manufacturing and research departments of the Incandescent Lamp Department of the General Electric Company have been maintained. The Edison Lamp Works and the National Lamp Works are the two sales divisions of this department. In its new quarters the Edison Lamp Works will have closer contact with these departments than is possible in its present location at Harrison, N. J.

Engineers Award Medal to Dorr

John Van Nostrand Dorr, prominent metallurgical engineer and president of the Dorr Company, engineers, New York, has been awarded the James Douglas medal of the American Institute of Mining and Metallurgical Engineers in recognition "of his invention of apparatus and achievement in developing and improving hydrometallurgical practice."

Ironton Fire Brick Representative

The Ironton Fire Brick Company, Ironton, Ohio, announces appointment of the Knoxville Sand & Lime Company, Knoxville, Tenn., as its Knoxville representative. The new agency will carry a complete stock of the Kentucky quality fire brick for local consumption and will receive orders for fire brick in carload lots.

Cleary Made Sales Manager

The Combustion Engineering Corporation, New York, has appointed James Cleary as general sales manager. Mr. Cleary joined the organization in 1921 and has served successively as district manager at Philadelphia and Detroit, assistant general sales manager and as Western manager at Chicago.

Merchandise Department Manager

Charles E. Wilson, formerly assistant to the vice-president, has been appointed manager of the merchandise department of the General Electric Company at Bridgeport, Conn., according to an announcement by Vice-President C. E. Patterson. Mr. Wilson will continue to supervise manufacturing, engineering and sales activities of the department.

Universal Atlas Cement Company

The business of the Atlas Portland Cement Co. and the Universal Portland Cement Co. is now conducted by the Universal Atlas Cement Co., a subsidiary of the United States Steel Corporation, New York. The Atlas and Universal organizations were brought together by the recent sale of the Atlas Portland Cement Co. to the Steel Corporation, of which the Universal Company is a subsidiary. Southern plants of the new organization are located at Hannibal, Mo., Leeds, Ala., and Waco, Tex., with Southern offices in St. Louis, Mo., Kansas City, Mo., Oklahoma City, Okla., Birmingham, Ala., and Waco.

INCREASED POTASH PRODUCTION

Imports of Potassium Salts for Fertilizer Use Were Lower in 1929

Cheaper potash for American farmers may be looked for in the not far distant future, with the development of the potash deposits recently discovered in this country and the expansion of the American potash industry which should tend to free this essential fertilizer element from present high costs of transportation, says Dr. J. W. Turrentine, in charge of the potash investigations of the Bureau of Chemistry and Soils, U. S. Department of Agriculture. Further:

"American potash production in 1929 was maintained on the higher level established in 1928, when substantial gains were made in total output, from 77,000 tons potash salts in 1927 to 104,000 tons in 1928. This important increase in the American production was followed by a marked decrease in imports of potash fertilizer salts in 1929. In the first 9 months of 1928 total imports were 672,354 tons, valued at \$14,805,063; in the first 9 months of 1929 total imports were 558,990 tons, with a value of \$12,692,300. Decline was 17 per cent in tonnage and 14 per cent in value. In the same period, however, there was an increase in imports of potash salts for chemical as contrasted with fertilizer purposes, amounting to approximately 20,000,000 pounds, worth slightly more than a million and a quarter dollars, an increase of 41 per cent in both quantity and value.

"America still remains the principal market for the foreign potash which enters transoceanic trade, and takes 32 per cent of all German exports. These figures indicate the size of our tremendous domestic market awaiting domestic supplies of potash.

"Increasing utilization of by-products in manufacture of potash for fertilizer purposes has been an important factor in making possible recent increase in American production. Expansion in the market for borax, a by-product of potash manufacture, represented by an increase of 60 per cent in American exports in 1928, illustrates this principle and the economic advantage to be gained from by-product development.

"The American potash industry may be expected to develop gradually and conservatively."

\$4,000,000 Construction Budget

Shreveport, La.—A construction budget for 1930 announced by the Southwestern Gas and Electric Company, of this city, through A. Lieberman, president, calls for the expenditure of \$4,000,000. The expansion and improvement of a steam generating station, installation of more sub-station capacity, erection of transmission and conversion equipment and the construction of new transmission lines account for \$2,858,000, while the construction of office buildings, gas distribution systems, street railway and ice plant improvements will require another

\$500,000. Miscellaneous and rural extensions, with real estate purchases, will account for the remainder of the budget.

Work to be undertaken includes large construction projects in Shreveport; Texarkana, Marshall and Longview, Texas; Fayetteville, Ark., and smaller projects in almost every town served by the company in East Texas, North Louisiana and West Arkansas.

Opening of New Orleans White-Way

New Orleans, La.—The formal opening of the great white-way in this city, designed and developed by General Electric engineers, will mark the beginning of the Mardi Gras celebration in February. This new ornamental lighting system contains more than 100 standards, set opposite and at 100-foot intervals down the parkway of Canal street and topped with three 1000-watt lighting units. Extending across the city for two miles, the 180-foot highway runs from the Mississippi River front to Claiborne avenue on the other side of the city. The standards, which also support trolley wires for four sets of tracks running down the middle of the parkway, were built by the Union Metal Company, Canton, Ohio, and carry state and city seals as base ornaments. The same type of pole is used to carry 750-watt lamps on Rampart street and is clustered around the new civic auditorium. All equipment for the project was purchased by the Public Service Company of New Orleans and it is understood that the 1000-watt lamps may be replaced with lamps of twice that capacity if desired.

Naval Stores Industry's Annual Conference

The "Seventh Annual Get-To-Gether Meeting" of the naval stores trade has been arranged for February 24-26, at Jacksonville, Fla. Incidentally, it is announced, this will be the First International Naval Stores Conference. Representatives are expected from naval stores producing countries abroad, and domestic producers are urged to meet them and learn something of their methods. Golf and tennis tournaments will be arranged. Hotel reservations should be made well in advance. A. L. Brogden, of the Flynn-Harris-Bullard Company, Jacksonville, is in charge of reservations. Headquarters will be at the Hotel George Washington. For the benefit of all who find it impossible to tear themselves away from Florida's balmy climate during the winter, return trip tickets will be good until June 15.

Icing Plant in Operation

Alexandria, La.—An ice manufacturing and car icing plant erected in the Missouri Pacific yards here by the Louisiana Ice and Utilities, Inc., Frank C. Landis, vice-president and general manager, has been put in operation. The capacity of the ice plant is 35 tons daily and the icing shed is of sufficient length to accommodate 60 refrigerator cars. Storage has been provided for 1700 tons of ice. The company has contracted with the Missouri-Pacific, Texas Pacific and the American Refrigerator Transit Company to re-ice fruit and vegetable shipments from the Rio Grande Valley and other points. The facilities cost \$150,000.

Real Conditions in Russia Will Crop Out

L. J. Fletcher, a United States engineer, in giving some observations concerning farming conditions during a 6-month tour of Russia, lets drop some facts which indicate conditions are not all that Communists would lead Americans to believe. In describing the character of the country he states that the topography and farming customs of the U. S. S. R. make tractor farming very easy to introduce into most of the agricultural areas of Russia.

But such statements as these offer food for thought:

"Much of the small grain growing region, particularly that devoted to the use of the Grain Trust, is an area where every precaution must be taken to conserve moisture.

"The peasant system of farming is chiefly characterized by the complete saving of all straw and grain. The small fields are all raked by hand after being harvested by simple types of reapers. Straw is used for thatching roofs, for

fuel, and to a limited extent for feed, and when threshing grain, either with steam operated threshing machines or by the crude hand methods, the chaff is always kept separate from the straw and used for feed.

"The transportation of grain from combines to elevators is a rather serious problem, particularly where the hauls are very long.

"Transportation of commodities in all parts of U. S. S. R. is a very serious problem. There are virtually no roads, with the few exceptions where stone paved roads have been built between some of the important cities. The roads connecting villages and providing means of communication with the small farms are really nothing but rutted wagon trails, there being no attempt to grade the roads and in some cases no bridges are provided over the streams. During rains these trails become so rutted that the peasants automatically shift back and forth on to and off of the cultivated fields, with the result that a considerable crop area is more or less damaged by fall and spring travel."

GAS PLANT COMPLETED IN FLORIDA

New Utility to Supply Fulford, Miami Shores and Miami Beach

Fulford, Fla.—A complete water gas plant with a high pressure distribution system to supply the cities of Fulford, Miami Shores and Miami Beach, was recently completed here for the Gas Company of Miami Beach, Inc., the work being handled by the General Engineering & Construction Company, Miami Beach. Two 8-foot water gas sets, furnished by the Gas Machinery Company, Cleveland, Ohio, are hydraulically operated and equipped with cooler gas connections and reversing valves in the seal separators. The same company also furnished blasting apparatus, charging apparatus, cooling scrubber, coils, pumps and piping. Purifying equipment consists of two 20 by 25 by 12-foot steel boxes for duplex operation. A relief holder of 100,000 cubic feet capacity and a bullet type high pressure holder of 200,000 cubic feet capacity at 60 pounds were built by the Stacey Brothers Gas Construction Company, Cincinnati, Ohio.

Power is furnished by two 225-horsepower horizontal return tube boilers supplied by the Combustion Engineering Corporation, New York, the boilers being equipped with multiplate flat flame burners and an automatic fuel oil pumping set manufactured by A. M. Lockett & Company, New Orleans, La. Boiler water is fed through two 7¼ by 4½ by 10 Worthington horizontal duplex pumps and heated by one 300-horsepower feed water heater made by the Cochran Corporation, Philadelphia, Pa. A 93-foot concrete chimney was built by the Weber Chimney Company, Chicago. Compressing equipment consists of one Ingersoll-Rand steam driven duplex Imperial type XPV plate valve compressor and one horizontal twin type single acting four-cycle gas driven compressor furnished by the C. & G. Cooper Company, Mount Vernon, Ohio. Gas after being compressed is run through an Ingersoll-Rand after cooler before entering the storage tank. Power for electric lighting is supplied by an electric generator using gas for fuel and manufactured by the Moon Manufacturing Company, Chicago. Five Moon flood lights illuminate the plant site at night. Boiler and gas generator houses are of the open type steel construction, while a machine room housing compressing equipment, blowers, unloading and circulating pumps, station meter and wash box, is of brick. Steel was supplied by the Truscon Steel Company, Youngstown, Ohio. The site of the plant is adjacent to the Dixie Highway and the Florida East Coast Railroad, covering an area of 3.4 acres and surrounded by an Anchor post fence.

Complete New Rail Line

A new link connecting Cape Girardeau and Illmo, Mo., has been effected by the Missouri Pacific Railroad Co. Included in the link is a 9.3-mile stretch purchased from the Cape Girardeau Northern Railway and a six-mile single track constructed from the south end of the purchased line to the double track line of the Southern Illinois and Missouri Bridge Co. at Illmo. The Missouri Pacific has trackage rights over this latter line, which forms a link in the company's low grade freight route between the East Side St. Louis Terminals and points in southeast Missouri, Arkansas and Louisiana. Grading for the project was done by W. P. McGeorge & Co., Pine Bluff, Ark., the tracks being constructed by Bilhorn, Bower & Peters, Inc., St. Louis, Mo. Rehabilitation of the old facilities was completed by company forces.

Southern Man Heads Crushed Stone Association

The thirteenth annual convention of the National Crushed Stone Association, held in Cincinnati, January 20-23, was attended by approximately 600 members, a record for the Association. Exhibits illustrated methods and equipment for handling stone from quarries to crushers and cars for shipping. The Association elected new officers as follows: President, W. F. Wise, Southwest Stone Co., Dallas, Texas; regional vice-presidents, C. M. Doolittle for Canada; Harry Landa for the Southwest; A. S. Lane, John S. Lane & Son, Inc., Springfield, Mass., for the East; Allen Patterson, National Limestone Co., Findlay, Ohio, for the Central States; W. R. Lanborn for the North and T. I. Weston, Weston & Brooker Co., Columbia, S. C., for the South.

ARCHITECTS FOR STATE CAPITOL

**Louisiana Plans 16 or 18-Story
Structure to Cost \$1,250,000**

Baton Rouge, La.—According to information released by Governor Long, plans and specifications for a new state capitol here will be prepared by Weiss, Dreyfous & Seiferth, New Orleans. It is understood that tentative plans call for a 16- or 18-story structure of white limestone. An appropriation for the building has been approved by the State Board of Liquidation and it is probable that it will be erected on the grounds of the old Louisiana State University. The structure will cost about \$1,250,000.

The Chamber of Commerce of Middleboro, Ky., is interested in the establishment of an airport at that point, for which a field has already been secured.

500-ACRE POULTRY FARM DEVELOPMENT NEAR ASHEVILLE

**Individual Units Completely Equipped
for Production**

A 500-acre development of individual poultry farms is being undertaken by the Suburban Poultry Homes, Inc., Asheville, N. C. Under the plan of the corporation, individual farms are completely equipped for poultry raising, each including a modern brick dwelling, and purchasers contract with the developers for sale of the entire farm output at prevailing market prices. New York firms have already contracted with the central corporation for purchase of 800,000 chickens and 80,000 squabs annually, the value estimated to aggregate \$1,000,000.

Central incubator and brooder plants are under construction and will be in operation early in February. The central plant consists of one brick and cement incubator house containing a 52,000-egg electric incubator built by the Smith Incubator Co., Cleveland, Ohio; six brooder houses, of construction similar to that of the incubator house, each with a battery brooder manufactured by the Bowers Manufacturing Co., Muncie, Ind.; twenty colony houses with concrete foundations and frame superstructure, and five laying houses of the same type of construction.

In addition to the central hatchery and brooder, the marketing division of the enterprise will operate a packing and shipping plant, the first building now being erected. On completion of the chicken raising facilities, work will be started on a central pigeon and squab plant to have a housing and nesting capacity of 5000 pairs of pigeons. It is estimated that about 75,000 squabs yearly will be available for sale. Each farm unit will have a pigeon loft and from 25 to 50 pairs of Carneau pigeons.

Dwellings on each farm are to be constructed of face brick and native stone, and to contain all modern improvements including electric refrigeration.

Douglas D. Ellington, Asheville, was architect for the entire development, including the landscape work. Plans were prepared under supervision of Dr. B. F. Kaupp of the Agricultural Department of the North Carolina State College. J. M. Geary, Asheville, is contractor. Electrical work is by the Ward Electric Co., Asheville, and fencing and building material is supplied by W. H. Westall & Co., Asheville.

Officers of the company promoting the development, which is called Skyland Farms, include the following: K. S. Clark, president and director; W. S. Alden, New York, vice-president and director; H. M. McCord, New York, director; J. A. Kelley, New York, director, and John H. Cathey, attorney.

FINANCIAL NEWS

Bond Issues Proposed

Ala., Birmingham—Public Improvement—City Comm., C. E. Armstrong, Comptroller, receives bids Feb. 18 for \$300,000, not to exceed 5% bonds.

Ala., Birmingham—Courthouse—Jefferson County Bd. of Revenue, authorized sale of \$250,000 of \$1,500,000 bonds, previously voted.

Ark., Pine Bluff—Public Library—City may vote in March on bonds; Chris Wright, City Engr.

Ark., Russellville—City considering \$100,000 bond election for airport and community building.

Fla., Madison—Road—Madison County Commrs., D. F. Burnett, Jr., Clk., received no bids for \$91,000, 5% bonds on Jan. 13. 1-9

Ga., Atlanta—City Council, I. N. Ragsdale, Mayor, advises city will not vote Feb. 5 on \$3,000,000 bonds; \$2,000,000, reconstruct Grady Hospital; \$1,000,000, reconstruct Battle Hill sanitarium. 11-14

Ga., Columbus—City Comm., Henry B. Crawford, Mgr., receives bids Mar. 4 on \$610,000 of \$1,235,000 bonds: \$155,000, sewer; \$150,000, hospital; \$125,000, schools; \$100,000, street; \$50,000, parks and playgrounds; \$30,000, airport.

Ky., Augusta—Street—City council receives bids Feb. 3 for \$80,000, 6% bonds.

Louisiana—Road—State Bd. of Liquidation, Baton Rouge, receives bids Mar. 1 for \$6,000,000 bonds. 1-26

La., Clinton—East Feliciana Parish School Bd., E. L. Dunn, Pres., called election for Feb. 19, on \$40,000 bonds.

La., Many—Sabine Parish School Bd., G. C. Reeves, Sec., receives bids Feb. 12 for \$45,000, Zweile Dist. bonds; lately noted rejected bids. 1-23

La., Monroe—Road—Ouachita Parish Police Jury, Bd. of Supvrs. Road Dist. No. 2, rejected bids for \$350,000, not to exceed 5% bonds; lately noted bids Jan. 15. 11-28

Md., Annapolis—Public Service Comm., Baltimore, authorized Anne Arundel County Sanitary Comm., to issue \$90,000 not to exceed 4% bonds for water and sewer extension.

Miss., Belzoni—Rehabilitation—Humphreys County, A. R. Hutchens, Chancery Clk., receives bids Feb. 3 for \$167,500, 4½% bonds.

Miss., Greenville—Road—Washington County Bd. of Supvrs., Howard Dyer, Chancery Clk., will sell, Feb. 3, \$300,000 of \$1,000,000 bonds.

Miss., Hazlehurst—Copiah County, Rockport, Union and Stronghope School Districts vote Feb. 7 on \$25,000 bonds.

Mo., Jefferson City—School—City, reported, votes soon on \$400,000 bonds.

Miss., Mayersville—Issaquena County Bd. of Supvrs., J. S. Myers, Clk., receives bids Mar. 3 for \$50,000, 6% Watson Separate Road Dist. No. 7 bonds.

Miss., Oma—East Copiah Special Consolidated School Dist., Lawrence County, votes Feb. 7 on \$25,000 bonds.

Mo., Parma—Water, Sewer—City, Jos. McLaughlin, Mayor, plans bond election.

Mo., Westplains—Courthouse—Howell County defeated \$125,000 bonds; Anna Lasater, County Clk. 12-19

N. C., Burlington—City, Bd. of Aldermen, F. E. McPherson, City Treas., receives bids Feb. 3 for \$83,000, \$1,000 denom. not to exceed 6% bonds; \$20,000, city hall; \$13,000, water and sewer; \$50,000, street and sidewalk.

N. C., Burlington—School—City voted \$195,000 bonds; Col. L. F. Williamson, Chmn., School Bd. 12-26

N. C., Goldsboro—Public Improvement—City, J. G. Spence, Clk., receives bids Feb. 3 for \$100,000, \$1,000 denom. not to exceed 6% bonds: \$4,400, water; \$27,000, sanitary sewer; \$2,100, sidewalk; \$34,500, storm sewer; \$11,000, enlarge fire alarm system; \$21,000, fire dept. equipment.

Okla., Frederick—Water, Sewer—City voted \$40,000 bonds. 10-3

Okla., Hobart—City considering issuing \$450,000 water supply bonds. 10-10

Okla., Lawton—City, Todd Sanders, Clk., votes Mar. 18 on \$250,000 bonds: \$200,000, water; \$50,000, sewer.

Okla., Maud—Bd. of Education, Bert Harris, Clk., will sell, about Feb. 1, \$100,000 bonds.

Okla., Muskogee—School Bd. called election for Feb. 11 on \$200,000 bonds.

Okla., Norman—School Bd., W. L. Gibbs, Pres., will call bond election within next month.

Okla., Terral—Water—Town, E. F. Rodgers, Clk., voted \$22,500 bonds; plans selling bonds.

S. C., Greenville—Water, Sewer—City, A. C. Mann, Mayor, receives bids early in Feb. for \$375,000 bonds.

S. C., Spartanburg—Spartanburg Metropolitan Comm., Thos. H. Daniel, Chmn., receives bids Feb. 4 for \$500,000 not to exceed 5% Dist. sewer bonds.

Tenn., Athens—McMinn County Bd. of Education, L. C. Ogle, Chmn., receives bids Feb. 25 for \$80,000, 5% refunding bonds. 1-23

Tenn., Benton—Refunding—Polk County, R. T. Nicholson, County Judge, receives bids Feb. 8 for \$100,000, 5% bonds. 1-16

Tenn., Bruceton—Water—City, A. G. Lowe, Mayor, receives bids Feb. 3 for \$45,000, 5½%, \$1000 denom. bonds. 1-16

Tenn., Memphis—City, D. C. Miller, Clk., probably sell about March \$1,000,000 bonds.

Tenn., Memphis—Shelby County Court authorized sale of \$250,000 additional bonds toward improving new county penal farm at Mullin's Station.

Tenn., Nashville—Davidson County Court considering \$3,000,000 bond election for City-County building.

Tenn., Sharon—Sharon Special School Dist. voted \$20,000 bonds; J. W. Overton, Asst. Sec., School Bd. 1-9

Tex., Big Spring—City votes in Feb. on \$340,000 bonds: \$115,000, water; \$50,000, fire station; \$175,000, sewer. 11-21

Tex., Boerne—Kendall County votes March 1 on \$91,000 bonds: \$171,000, road; \$20,000, courthouse improvements.

Tex., Cleburne—City called special election for Feb. 11 for electric light and power plant bonds.

Tex., Dallas—Dallas County, F. H. Alexander, County Judge, receives bids Feb. 3 for \$3,000,000 of \$6,950,000 bonds previously voted.

Tex., Franklin—Robertson County Commrs. Court, Joe Y. McNutt, County Judge, receives bids Feb. 10 for \$50,000, 5% Road Dist. No. 4 bonds.

Tex., Fredericksburg—Road—Gillespie County, Albert E. Klett, County Clk., receives bids Feb. 24 for \$220,000, Series B bonds.

Tex., Kingsville—Road—Kleberg County may vote early in Mar. on \$150,000 bonds.

Tex., Liberty—Courthouse—Liberty County Commrs. authorized bond election.

Tex., Perryton—Perryton Independent School Dist., W. B. Irvin, Supt., votes Feb. 8 on \$60,000 or \$90,000 bonds.

Tex., San Juan—Hidalgo County Water Improvement Dist. No. 2, Clay Everhard, Pres., received no bids on Jan. 9 for \$1,000,000, 6% bonds. 1-2

Tex., Sweetwater—School—City voted \$180,000 bonds; C. R. Simmons, Pres., Bd. of Education. 1-16

Tex., Yoakum—Street—City, C. C. Crutchfield, Asst. City Mgr., receives bids Feb. 6 for \$100,000 5% bonds.

Tex., Weslaco—Hidalgo County Water Improvement Dist. No. 5, H. V. Watts, Sec., North Ave., Donna, reported, voted \$90,000 bonds for irrigation. 12-12

W. Va., Bridgeport—Water—City votes Feb. 25 on \$15,000 bonds.

W. Va., Middlebourne—Tyler County, Middlebourne and Ellsworth Dist., plan voting in Mar. on \$98,000 road bonds. 10-3

Bond Issues Sold

Ala., Anniston—Library—City, W. F. Morton, Jr., Treas., sold \$35,000, 5½%, \$1,000 denom. bonds to Marx & Co., Birmingham, at \$55,438 and accrued interest. 1-9

Ark., Forrest City—Paving—City sold \$60,000 bonds at 103.55 to Utrusco Corp. of Little Rock, investment company affiliated with Union Trust Co.

Ark., Osceola—Road Maintenance—Commrs. Mississippi County Joiner Road Maintenance Dist. No. 1, C. W. Adams, Joiner, Commr.,

reported, sold \$150,000 bonds to Brown-Crummer Co., Wichita, Kansas.

Ga., Lafayette—Walker County sold road building warrants to Peerless Woolen Mills, Rossville, Ga., Standard-Coosa-Thatcher Co., and Hamilton Bank, of Chattanooga, to build conc. road from Rossville to Chickamauga Park.

Ga., Rome—School—Floyd County School Bd., A. N. Swain, Supt., reported, sold \$50,000 bonds to First National Bank of Rome, at \$48,900.

Md., Hagerstown—School—Washington County Commrs. sold \$471,000 4½% bonds at 102.069, jointly, to Baker, Watts & Co., Nelson, Cook & Co., and Townsend Scott & Sons, all Baltimore. 1-16

Md., Rockville—Indebtedness—Montgomery County Commrs. sold \$250,000, 6% certificates, at 100.51, to Gillet & Co., Baltimore.

Mo., Independence—Road, Bridge—Jackson County, Harry A. Sturgis, County Treas., sold \$2,000,000, 4½% bonds at 100.71, to syndicate composed of National City Co., Chatham-Phenix Corp., both New York; Harris Trust & Savings Bank, Northern Trust Co., both Chicago; Commerce Trust Co., Kansas City; Stix & Co., First National Co., both St. Louis, and R. H. Moulton & Co., Los Angeles, California. 1-16

N. C., Durham—Durham County sold \$185,000 bonds to Bankers Securities Corporation, Durham, at par and \$5 premium to retire similar bonds.

Tex., Galveston—Courthouse, Jail—Galveston County Commrs., E. B. Holman, County Judge, sold \$100,000 bonds at par and accrued interest to Stranahan, Harris & Oatis, Inc., Toledo; on condition that same concern be given option until Mar. 1 on \$700,000 road bond issue, at same price. 11-21

Tex., Lubbock—Lubbock Independent School Dist., A. C. Jackson, Sec., reported, sold \$650,000 bonds to Brown-Crummer Co., Wichita, Kansas; recently noted rejected bids. 12-26

Tex., Paducah—Road—Cottle County, Jas. M. Wheatley, County Judge, sold \$350,000, 5% bonds, jointly, to Caldwell & Co., Nashville, and Brown-Crummer Co., Wichita, Kansas. 1-9

Tex., Tyler—City sold \$205,000, 5% bonds to Garrett & Co., Dallas: \$175,000, sewer; \$30,000, sub-fire station. 12-19

Va., Norfolk—City, I. Walke Truxton, Mgr., sold \$1,500,000 tax anticipation notes to R. W. Pressprich & Co., New York: \$1,000,000, at \$23 premium; \$500,000, at \$17 premium. (Continued from page 84)

New Financial Corporations

Ark., Little Rock—Home Securities & Investment Co., capital \$7,000,000, chartered; A. B. Banks, Home Insurance Bldg.

Ark., Texarkana—Texarkana Bond & Mortgage Co., capital \$50,000, chartered; Leslie Anderson, Joseph Eldridge, H. S. Brashear.

Fla., Miami—Investment Securities Corp., Inc., chartered; R. E. Smith, Biscayne Bldg.

Fla., Orlando—Florida Faith, Inc., chartered; H. M. and C. M. Voorhis, Lake Adair Blvd., stocks, bonds.

Mo., St. Louis—Mound City Investment Co., chartered; George W. Clarkson, 443 Northmoor St.

Tenn., Chattanooga—Franklin Savings & Loan Bank, capital \$500,000, organizing; H. M. McCullough, Pres.; Roy McKenzie, F. Woodall Johnson, etc., tentative Bd. of Directors.

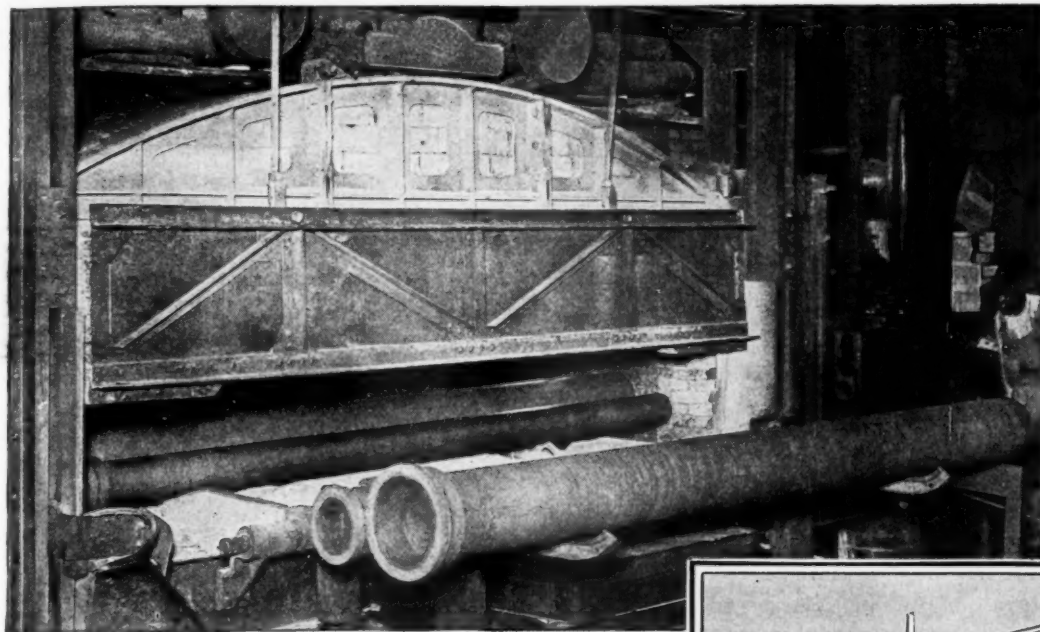
Tenn., Sparta—Peoples Bank & Trust Co., reorganized; L. E. Tubb, Pres.; Andy Davis, Cashier.

W. Va., Charleston—National Thrift Savings, Kanawha Valley Bank Bldg., capital \$500,000, chartered; W. D. Given, F. W. Sibert, George H. Williamson.

American-Traders Security Corp., J. C. Persons, Pres., Birmingham, Ala., purchased Tarrant City Savings Bank, K. A. Conville, Pres., Tarrant City, Ala.; will increase capital to \$100,000.

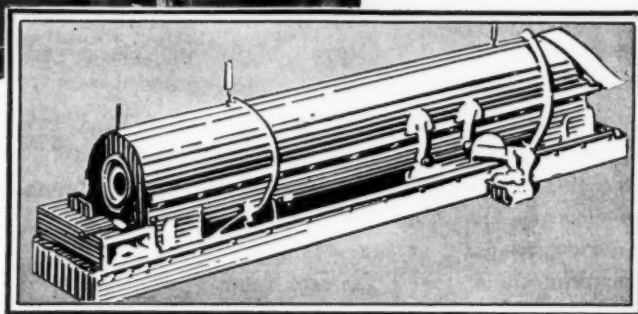
Bank of Winston, D. R. McGlohon, Pres., and Merchants and Farmers Bank, J. E. Vann, Pres., both Winton, N. C., plan consolidating.

(Continued on page 84)



The large photograph shows the deLavaud annealing furnace where controlled temperatures uniformly anneal every length of deLavaud pipe.

Below is the famous deLavaud machine which produces the strongest cast iron pipe known.



Controlled annealing gives deLavaud pipe uniform strength and flexibility

THE controlled annealing in the manufacture of deLavaud pipe may be regarded as one of the greatest advances in the cast iron pipe industry. All cast iron pipe must be annealed at some stage of its manufacture. For annealing, as every engineer knows, reduces brittleness and tends to eliminate casting strains.

But only in the manufacture of deLavaud pipe is the annealing process accurately controlled. Every length of deLavaud pipe is heated in an oven to a temperature of 1750 degrees and *uniformly* annealed from bell to spigot. The result is the uniform flexibility of deLavaud pipe and absence of all casting strains.

The superior strength of deLavaud pipe is another reason for its wide acceptance. deLavaud pipe is made by pouring molten

iron into a rapidly revolving metal mold. This mold is water jacketed. When the molten iron comes in contact with the chilled surface of the mold, a physical change takes place in the structure of the iron; all the coarse particles become finely and evenly divided. At the same time centrifugal force—a force 40 times greater than gravity—drives out impurities at the center.

The fine grain structure of deLavaud pipe metal together with its remarkable freedom from impurities enable deLavaud pipe to show an average tensile strength of more than 30,000 lbs. per square inch.

Let us send you a copy of the deLavaud handbook. It contains facts and figures regarding the most interesting pipe development in recent years.

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Our pipe bears the "Q-Check" trademark of The Cast Iron Pipe Research Association

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Birmingham
Kansas City

Minneapolis
Seattle

San Francisco
Los Angeles

FINANCIAL NEWS

(Continued from page 82)

Barnett National Bank, W. R. McQuaid, Pres., Jacksonville, increased capital, \$1,000,000 to \$1,500,000, to permit formation of subsidiary company known as Barnett National Securities Corporation, stock of which company to be inseparable from that of bank, and which company will be holding company for banks which it may establish throughout Florida; E. G. Haskell, Asst. Cashier. 1-16

Commercial National Bank of Washington, R. Golden Donaldson, Pres., Fourteen-

th & G St. N. W., and Continental Trust Co., Wade H. Cooper, Pres., both Washington, D. C., consolidated with Wade H. Cooper, Pres.; combined resources about \$23,000,000; Continental Trust Co., retiring from banking field.

Depew National Bank, C. N. Lee, Pres., and State National Bank, J. L. West, Pres., both Depew, Okla., merged, with \$482,000, total assets; James L. West, Pres.; H. G. Merryman, Cashier.

Mortgage Bond and Title Corp. of Baltimore, 337 St. Paul St., Baltimore, Md., an-

nounces completion of arrangements to acquire mortgage business of Chemical Trust Co. of New York, Percy H. Johnston, Pres., New York City, involving over \$12,000,000 worth of mortgages on properties located in 62 cities of United States; capital over \$7,000,000.

South Carolina National Bank, B. M. Edwards, V.-P., Columbia, S. C., purchased National Bank of Leesville, H. F. Hendrix, Pres., Leesville, S. C., and Commercial Bank of Newberry, John M. Kinard, Pres., Newberry, S. C.

Southern Bankers Conference

A southwide banking conference is announced to be held in Atlanta March 25-26 to consider "better bank management." It is to be one of several regional gatherings to be held throughout the United States under auspices of the Commission on Banking Practices of the American Bankers Association.

Frank W. Simmonds, deputy manager of the American Bankers Association, is arranging details with a special committee from the Atlanta Clearing House Association, composed of James D. Robinson, president of that organization and vice-president of the First National Bank; H. Lane Young, vice-president of the Citizens and Southern National Bank; Ryburn G. Clay, president of the Fulton National Bank, and Robert F. Maddox, chairman of the executive committee of the First National Bank.

The program, as outlined, will embrace 25 topics to include loan administration, farmer loans, merchant loans, capital loans, commercial paper, essentials of sound banking investment, account analysis, chain store, railroad, express company accounts, interest on deposits, bank management and directors' responsibility, regional clearing house associations, credit bureaus, credit information, insurance and fidelity bonds.

It is announced that Ronald Ramson, of the Fulton National Bank, will be general conference chairman, with Robert F. Maddox presiding at all meetings.

The commission on banking practices of the American Bankers Association and the state associations of the Southeast have cooperated in planning the Atlanta conference, and it is the intention to plan subjects so that they will have a vital bearing on the sound management of banks.

\$610,000 Bond Offering

Columbus, Ga.—Bids will be opened March 4 by Henry B. Crawford, city manager, for the purchase of \$610,000 municipal bonds, including \$155,000 sewer bonds; \$150,000, hospital; \$125,000, schools; \$100,000, streets; \$50,000, parks and playgrounds, and \$30,000 airport bonds.

New Directors for Seaboard Air Line

Petersburg, Va.—Stockholders of the Seaboard Air Line Railway Company, meeting here, elected the following new members of the board of directors: Preston S. Arkwright, Atlanta, Ga.; Walter W. Colpitts, Norman H. Davis, George S. Franklin and Everett Macy, all of New York; Harvey C. Couch, Pine Bluff, Ark.; Robert Lassiter, Charlotte, N. C.; Oscar Wells and E. A. Yates, Birmingham, Ala., and Louis H. Windholz, Norfolk, Va. William H. Coverdale, New York, was elected chairman of the board. This meeting marks the final step in the change of control of the Seaboard Air Line, as the result of the purchase of approximately \$10,000,000 worth of Seaboard securities by interests identified with Dillon, Read & Co., Coverdale & Colpitts, Chase National Bank and the Electric Bond & Share Co., all of New York. A change in the capital structure of the company, which became effective last fall, provided for the sale of new common stock at \$12 per share, which is said to have yielded a fund of more than \$20,000,000, from which the company has paid bank loans of \$3,000,000 and a \$2,000,000 note held by the Director-General of Railroads. It is understood the railroad has realized a net debt reduction of nearly \$16,000,000. L. R. Powell, Jr., Norfolk, is president of the company.

PROPOSALS

Bids close March 5, 1930.

Main Building West Virginia State Capitol for the State of West Virginia

NOTICE TO CONTRACTORS

Charleston, Kanawha County, W. Va. Sealed proposals will be received by the Capitol Building Commission at the Governor's office in Charleston, W. Va., until 2 P. M. Wednesday, March 5th, 1930, for furnishing all labor and material for the general construction and the installation of mechanical equipment plant of the above-named building, according to drawings and specifications prepared by Cass Gilbert, Architect.

The building is to be fireproof construction, size 536'x106', three stories high, with two wings 94'x60', one story, dome 266' high, pent house, full basement. Exterior Indiana Limestone.

Two copies of the drawings and specifications will be on file in the office of the Capitol Building Commission after January 20, 1930, for examination and use of all bidders.

If bidders wish individual sets of drawings and specifications for their own use in preparing their bid, they may obtain such individual sets upon APPLICATION IN WRITING TO CASS GILBERT, Architect, upon payment of the actual cost of blue-printing same. A certified check for \$200.00 is to accompany request for individual sets, which check will be returned upon return of said drawings and specifications. The cost of blueprinting drawings and specifications will be as follows: General Construction, \$40.00; Heating and Ventilation, Plumbing and Gas Fitting, Electrical Work and Elevators, \$15.00 each. Another check, representing the cost of duplicating the individual set of drawings and specifications requested, must also accompany application.

Such individual sets are for estimating purposes only and are to remain the property of the Architect, and are to be returned to him immediately after bids have been submitted.

A certified check for \$40,000.00 must accompany proposal for GENERAL CONSTRUCTION and certified checks for \$4000.00 must accompany proposals for HEATING AND VENTILATION, PLUMBING AND GAS FITTING, ELECTRICAL WORK AND ELEVATORS. Said checks are to be drawn on some solvent banking institution and made payable to the Capitol Building Commission of the State of West Virginia, Charleston, West Virginia.

In lieu of said certified checks, bonds of equal amount of the United States or the State of West Virginia may accompany proposals. The checks or bonds of all bidders will be returned to them after award of contract.

No proposal received after the time stated above will be considered. The right is reserved to reject any and all bids and to waive defect or informality in any bid.

CAPITOL BUILDING COMMISSION.
By WILLIAM G. CONLEY,
Governor.

Charleston, West Virginia,
January 16, 1930.

(Additional Proposals on Pages 87-89)

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